

# **Magna Metals Site**

**NYSDEC Site No. 360003**

**CORTLANDT, NEW YORK**

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## **Soil Vapor Investigation Report**

**AKRF Project Number: 40256**

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## 1.0 INTRODUCTION

Investigation at the Magna Metals Site, located in Cortlandt, New York, has been conducted to comply with a New York State Department of Environmental Conservation's (NYSDEC) Consent Order (Site No. 360003). In June 2006, Tetra Tech EC, Inc. (TTI) submitted a letter report to the NYSDEC that summarized the results of soil vapor sampling and additional groundwater sampling. In November 2006, the NYSDEC issued a correspondence requiring sampling of the office/warehouse building located east of the former Magna Metals building to confirm that soil vapor intrusion is not occurring. This report documents the collection of sub-slab soil vapor samples and air samples to satisfy the NYSDEC requirements.

## 2.0 SITE DESCRIPTION

### 2.1 Site Location

The Magna Metals site is located in the Town of Cortlandt, Westchester County, New York, near the intersection of Furnace Dock Road and Maple Avenue. A site location map is included in Figure 1. Nearby towns include Peekskill and Croton-on-Hudson, and the Hudson River is located 3 miles west of the site.

### 2.2 Site and Vicinity Characteristics

Locally, the site is part of a larger commercial property owned by Baker Properties, having several operating businesses which currently include Polymedco, Inc., Motion Labs, Inc., and International Purchasing Systems. The office/warehouse building was reported by the owner to include some manufacturing activities. Baker Properties acquired the property from ISC Properties, Inc. (ISCP) in 1982, and has leased it to various tenants. The identity of these tenants, their use of the property, and their waste disposal practices are unknown. The Croton Egg Farm and an inactive emery mine are located to the west and to the north-northwest of the site, respectively. To the north, south, and east of the project site are residential areas. A wetland area is located between the site and the residential area southwest of the site.

### 2.3 Site Geology, Hydrogeology and Subsurface Characteristics

Topography is variable throughout the 0.5-mile radius from the site. Elevations range from 300 to 600 feet above mean sea level (MSL). On the former Magna Metals site, topography ranges from 360 feet MSL along the eastern site boundary to 320 feet MSL along the western site boundary. Stormwater drainage flows towards the west, following site topography, and drains into an unnamed tributary to Furnace Brook. The tributary flows south/southwest and discharges into a pond located in a large wetland area.

Stormwater on the former Magna Metals site leaves the site via overland flow and enters into the unnamed tributary. One catch basin was observed by TTI on the former site property. This basin is located in the central western portion of the site and collects discharge water from a roadway/parking area. The roadway is a mix of gravel and pavement. A search for the catch basin's outfall pipe was conducted along the unnamed tributary. An outfall pipe was not located. The stormwater collection system on Furnace Dock Road discharges into the unnamed tributary near the intersection of Furnace Dock Road and Gilman Lane.

The geologic characteristics of the subsurface conditions at the site consist primarily of a sandy to silty sand overburden unit, approximately 10 to 20 feet thick, overlying bedrock. The bedrock is mapped by the New York State Museum and Science Service as Hornblende Norite, which is a

part of the Cortlandt Mafic Complex. Overburden groundwater exists in the form of a very shallow overburden aquifer (i.e., typically less than five feet in thickness). Groundwater flow from the site is in the western direction towards the stream and wetland area.

Results of the slug tests completed by TTI indicate a range in hydraulic conductivity values from  $5.3 \times 10^{-5}$  cm/sec (or 0.16 ft/day) at MW-1 in the higher portion of the site to  $2.2 \times 10^{-3}$  cm/sec (6.2 ft/day) at MW-3 in the lower portion of the leach pit area. Previous groundwater sampling by TTI indicates that some monitoring wells were observed to be dry during seasonal low groundwater conditions.

## 2.4 Review of Site History

Metal plating, polishing, and lacquering operations were conducted at the Magna Metals site from 1955 to 1979. During operation, iron, lead, copper, nickel, and zinc chlorides, cyanides, and sulfates were discharged to a series of leaching pits. Spent trichloroethylene (TCE) was drummed and removed.

## 2.5 Previous Studies

Between 1978 and 1984, site investigations were completed by the New York State Department of Health (NYSDOH), the NYSDEC, and William Cosulich to determine if property uses had resulted in contamination. The investigations concluded that soil, groundwater, sediment, and, surface water contamination existed at the site.

In 1998, Foster Wheeler Environmental Corporation (predecessor to TTI) completed a Remedial Investigation/Feasibility Study (RI/FS) to delineate the nature and extent of leach pit/septic tank/holding tank, surface water, sediment, surface soil, subsurface soil, and groundwater contamination at the site, such that an evaluation of (1) the nature and extent of site contamination, (2) the potential impacts, if any, and (3) the remedial measure options could be performed. The field investigation program consisted of the drilling of soil borings, the installation and development of monitoring wells, the performance of a habitat-based assessment, and the sampling and analysis of various environmental media including septic tank/leach pit sludge and water, surface soil, subsurface soil, surface water, sediment, and groundwater. A geophysical survey was added to the field investigation to improve location accuracy of the leach pit/septic tank/holding tank sampling.

In 2004, TTI completed a Draft Supplemental RI/FS to perform horizontal and vertical delineation of the soil and groundwater contamination in the potential source area of the site, the leach pit area. The investigation included a geophysical and excavation survey to locate leach pits, leach pit excavation, a homeowner well survey, installation of overburden monitoring wells and a bedrock monitoring well, and collection of soil, groundwater, surface water and sediment samples. Based on the data compiled in the supplemental investigation, TTI concluded the following:

- Concentrations and distributions of contaminant compounds and analytes detected during the Supplemental RI are consistent with contaminant concentrations and distributions detected during previous investigations.
- Xylenes, semivolatile organic compounds (SVOCs), and metals were detected in leach pit sludge samples. Xylenes were detected in soil samples collected below the leach pits
- TCE was detected in the groundwater sample collected from MW-04 and MW-04D.
- Media sampled were affected by inorganic contaminants of concern at concentrations above soil cleanup criteria. In particular, chromium, copper, mercury, nickel, and zinc are

potentially site related compounds that were detected at concentrations exceeding applicable criteria.

- Thirteen leach pits/septic pits had been discovered at the Magna Metals site.
- There appeared to have been two phases of leach pit/septic tank construction at the site. The first and older set of leach pits was constructed of concrete cinder blocks with a soil or gravel bottom. The second phase of leach pits was constructed of prefabricated concrete cylinders with perforated sides and apparently soil or gravel bottoms. Sludge or sludge cakes were still present in twelve of the thirteen pits at the site.
- Based on inorganic analytical results (particularly copper) for the surface water, groundwater, and surface soil samples collected downgradient of the leach pit area and the former Magna Metals building, it appeared that the wetlands east of Furnace Brook and the unnamed tributary may have been impacted by contaminated groundwater or surface runoff originating in the vicinity of the leach pit area and site building.
- Impacts to pelagic and benthic aquatic life were observed in indigenous and laboratory based analyses. The primary environmental media of concern were surface waters and sediments of Furnace Brook, its unnamed tributary, and the palustrine wetlands associated with the site.

In 2006, TTI completed an additional investigation, which included the collection of groundwater samples from existing wells and two new wells next to the former Magna Metals building, and soil vapor samples from three exterior locations along western side of office/warehouse building, five exterior locations within the area containing the leach pits, and one interior sub-slab sample from the building south of the Magna Metals building and the office/warehouse building.

The sampling results indicated that groundwater collected from the two new monitoring wells did not contain contaminants above NYSDEC water quality standards and the overall samples were consistent with previous data. The soil gas sample results documented that VOCs were detected at concentrations ranging from 1 to 1,900 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). A site map showing the soil gas sampling locations and the laboratory sampling results is included as Figure 2. TTI concluded that the sampling results were consistent with the findings of the current and previous sampling and did not indicate there were unknown sources.

In November 2006, the NYSDEC issued correspondence requiring the sampling of sub-slab soil vapor from the on-site office/warehouse building to the east of the Magna Metals building to confirm that soil vapor intrusion was not occurring. This was in response to a TCE concentration of 59 micrograms per cubic meter in one soil vapor sample (SV-03) that was collected next to the office/warehouse building.

### **3.0 FIELD PROGRAM**

The objectives of the field-sampling program were to confirm that soil vapor intrusion is not occurring in office/warehouse building located east of the former Magna Metals building. The field procedures and sampling activities were completed in accordance with NYSDOH's requirements (NYSDOH, 2006). The field program is outlined in Section 3.1, and the subsequent sections give the summary of sampling implementation. The field program was conducted in accordance with the detailed methodologies described in the NYSDEC approved Soil Vapor Investigation Work Plan (SVIWP)

#### **3.1 Field Program Summary**

Site access for the property and study building was agreed upon between ISCP and the property owner/manager through a signed access agreement. Sub-slab soil-gas samples and indoor air

samples were collected at five locations from the lowest level in the office/warehouse building participating in this study. Figure 2 shows the project site building and the locations for soil gas sampling.

### 3.2 Pre-Sampling Survey

On March 16, 2007, AKRF initiated the soil-vapor sampling program by completing a pre-sampling survey of the site building. Mr. Marc Godick and Bryan Zieroff of AKRF were accompanied by Nathan Walz of the NYSDOH, Don Duthaler of Baker Properties (site owner representative), and Ernie Sweet of Environmental Resource Management (ERM) (consultant for the site owner). The survey was completed to document any factors that may affect indoor air quality and to determine the location and quantity of sampling locations. The survey included interviews with a representative of each building occupant. The building occupants and corresponding representative included:

- Polymedco, Inc. – Richard DeAlto
- Motion Labs, Inc. – John Coppolecchia
- International Purchasing Systems – Michael Brooks

Documentation was compiled of the building characteristics, air flow patterns, heating, venting and air conditioning, occupancy, water and sewage utilities, building operations, product inventory, and any other known factors that may affect indoor air quality. A mini Rae photoionization detector (PID) was used during the survey to sample ambient air for the presence of VOCs. Prior to conducting the survey, the PID was calibrated with 100 parts per million (ppm) isobutylene in accordance with the manufacturer's instructions. A NYSDOH Indoor Air Quality Questionnaire and Building Inventory form for each occupant was used to document the detailed results of the survey and is included in Appendix A.

Soil Gas Well I.D.	Sampling Rationale
SV-10	Soil gas investigation at the north end of the Polymedco office area. Sub-slab point through floor in corner of copy room. Ambient air sample in at breathing level in copy room.
SV-11	Soil gas investigation in the central area of the Polymedco office. Sub-slab point through floor in employee office. Ambient air sample on shelf in employee office.
SV-12	Soil gas investigation in the south end of the Polymedco office area in lab coat closet. Ambient air sample on shelf in closet.
SV-13	Soil gas investigation in the Motion Labs office and production area. Sub-slab point through 1 <sup>st</sup> floor machine shop. Ambient air sample in 2 <sup>nd</sup> floor office area.
SV-14	Soil gas investigation in the office area of the Polymedco warehouse. Sub-slab point through floor near in northeast corner of warehouse. Ambient air location in small office area in the northeast corner of the warehouse.
SV-15	Soil gas investigation in the International Purchasing Systems area. Sub-slab point through concrete floor in dry goods warehouse. Ambient air sample location in small office area on north side of the warehouse.

The building was constructed with concrete block walls and a concrete slab floor. Sections of the building interior were improved with wood frame construction and drop ceilings. A summary of the survey for each tenant is described in this section. Photographs taken during the survey are included in Appendix B. The building layout and tenant locations are shown on Figure 2.

Polymedco, Inc.

Polymedco occupied two sections of the site building; the western section consisted of a one story office area, laboratory, and a loading dock storage area, and the eastern portion consisted of a bulk warehouse (Figure 2). There was no known chemical storage in the office area. The laboratory was observed to contain a refrigerated storage unit that stored reagents for control testing of the laboratory machines. The loading dock area contained shelved storage units that stored a variety of containerized chemicals and cleaning products. Items of note included buckets of paint, spray paint, turpentine, citrus degreaser, insect spray, varnish cleaner, wood polish, tiki-torch oil, metal polish, and spray adhesive. There were no PID detections in these areas. Storage cabinets were also present in the northern end of the warehouse. The warehouse cabinets contained spray paint and primer, paint remover, citrus degreaser, PVC primer and cement, and an assortment of disinfectants and household cleaners. A slop sink and mop storage area next to the chemical storage contained a five-gallon paint bucket, a one-gallon paint thinner can and disinfectant cleaners. A full list of all stored compounds is attached to the pre-sampling survey in Appendix A. Organic vapors were detected by the PID at concentrations ranging from 3 to 20 ppm in the slop sink area. A fuel oil boiler was located on the eastern side of the warehouse. The boiler area was secured by a spill containment berm. Fuel oil staining and petroleum absorbent materials were observed on the concrete floor within the containment berm. Fuel oil odors were evident in this area.

Motion Labs, Inc.

Motion labs occupied the section of the site building between the Polymedco office and warehouse, and the space consisted of a ground floor machine shop and a second floor manufacturing and office area. The cutting oils for machine operation were reported as being alcohol based. Burlap bags used for product shipment were spray painted once a week in the western side of the shop. Small mobile shelf units (on wheels) and milk crates used for chemical storage were seen at multiple locations throughout the first floor. Stored items included Emerald Topaz cleaner and degreaser, Excelene polishing oil (containing petroleum distillates), a one-gallon container of concentrated degreaser (containing petroleum and phenols), white board cleaner, a one-gallon container of velocite oil No. 6, and a five-gallon container of kerosene. Organic vapors were detected by the PID at concentrations up to 58 ppm above an open container of petroleum distillates. The second floor manufacturing area contained air driven equipment for product assembly. A commercial spray lubricant was used on the equipment and isopropyl alcohol was used for cleaning the electric panels. A storage area next to the cafeteria contained floor sealer, glass cleaner, ammonia and an assortment of household cleaners. Portable storage shelves were observed containing non-chlorinated degreaser spray, spray paint, a five-gallon container of light aliphatic naphtha, and containers of locking cement for nuts/bolts. Flammable material storage cabinets were located on the second floor and contained solder remover, spray lubricants, air tool cleaners (containing petroleum distillates), a five-gallon gasoline container, a one-gallon kerosene container, scotch grip adhesive, paint cans, spray paint, denatured solvent, and contact cement. There were no detections with the PID while screening the indoor air on the second floor.

An external boiler room was enclosed in an outdoor area on the north end of the Motion Labs section of the building. The boiler room contained a fuel oil boiler and a compressor. Multiple

one-gallon paint cans and a five-gallon paint bucket were stored in the boiler room. An open five-gallon bucket was observed to be full of used compressor oil.

#### International Purchasing Systems

International Purchasing Systems occupied the eastern portion of the site building and consisted of a dry goods warehouse and a small office area. There was no chemical usage or storage reported to be associated with business operations. An oil furnace was used to heat the office area. The warehouse was not heated. A small janitor closet contained a one-gallon container of citrus degreaser, carpet cleaner, a one-gallon container of degreaser (containing petroleum distillates) and an assortment of household cleaners. There were no PID detections in the International Purchasing Systems occupied areas.

A total of six sub-slab sample point locations (SV-10 through SV-15) and six corresponding ambient air locations were approved by the NYSDOH. The sampling locations are shown on Figure 3. The rationale for each soil gas well location is summarized as follows:

### **3.3 Sub-Slab Soil Gas Sampling**

On March 24, 2007, Zebra Environmental, Inc. (Zebra) of Lynbrook, New York, installed the interior soil-gas sampling points (SV-11 through SV-15), with the exception of SV-10. The area selected for SV-10 consisted of a wood framed floor constructed on top of the concrete floor slab. The base bolt used to secure the coring machine was being pulled out of the wood floor during the coring process. An attempt was made to use longer base bolts to secure the coring machine into the underlying concrete slab. After several attempts Zebra indicated they were unable to properly secure the coring machine, which is required by the safety guidelines for proper usage. A dedicated soil gas sampling point was installed at the remaining locations as described in the SVIWP. Photographs showing the vapor point installation are included in Appendix B.

On March 29, 2007, AKRF returned to the site to complete the field sampling program as stated in the SVIWP. AKRF personnel were accompanied by Ernie Sweet of ERM. Prior to initiating sample collection, each sub-slab sampling point was sealed, purged, and screened for the helium tracer gas as indicated in the SVIWP. Sample collection was initiated and during the course of the 8-hour sampling period the field personnel noted that some of the flow regulators were not functioning properly. Since the sample collection was no longer following the SVIWP, the sampling program was immediately stopped and rescheduled.

On April 5, 2007, AKRF returned to the site with new, dedicated sampling equipment to complete the field sampling program. AKRF personnel were accompanied by Ernie Sweet of ERM, Paul Simms of Severn Trent Laboratories (STL), and Sally Dewes of the NYSDEC. Prior to initiating sample collection, each sub-slab sampling point was sealed, purged, and screened for the helium tracer gas as indicated in the SVIWP. Following purging, soil gas samples for VOC analysis were collected by connecting the sample tubing to a six-liter Summa canister equipped with a vacuum gauge and flow regulator set to collect a six-liter sample over an 8-hour sampling period. The sub-slab sampling points ("S.S" label for SV-11 through SV-15 indicates sub-slab sample), were sampled as indicated in the SVIWP. Photographs of the sampling process are included in Appendix B. Sampling logs are included in Appendix C

### **3.4 Indoor Air Sampling**

Indoor air samples [labeled SV-10 (A.A) through SV-15 (A.A)] were collected concurrently with the soil gas sampling. The indoor air samples were placed at the locations agreed upon during the pre-sampling survey and sampling was conducted in accordance with SVIWP.

### 3.5 Laboratory Methods

The samples were analyzed for VOCs by EPA Method TO-15 with a detection limit of 1 ug/m<sup>3</sup> for all compounds, except for trichloroethylene, which had a detection limit of 0.25 ug/m<sup>3</sup> for indoor air samples. All sample analysis was performed in a New York State Department of Health Environmental Laboratory Approval Program (NYSDOH-ELAP) laboratory certified to perform NYSDEC Analytical Services Protocol (ASP). The laboratory produced Category B deliverables. Samples were shipped to the laboratory with appropriate chain of custody documentation.

### 3.6 Quality Assurance / Quality Control

In addition to the laboratory analysis of the field samples, additional analysis was included for quality control measures. These samples included one duplicate, reported as "DUP (S.S)", taken at the indoor air location SV-13 and two background ambient (outdoor) air samples, reported as "Outdoor 1 (A.A)" and "Outdoor 2 (A.A)". All three samples were analyzed for VOCs by EPA Method TO-15. Category B deliverables are included in Appendix D.

## 4.0 ANALYTICAL RESULTS

### 4.1 Field Results

Levels of helium detected at all locations were either non detect or below 1% indicating no significant short circuiting of outside air into the soil gas sample ports during purging.

### 4.2 Laboratory Results

#### Sub-Slab Samples

Sub-slab analytical results are summarized in Table 1. Concentrations of VOCs detected were compared to the action level guidance values (from Matrix 1 and Matrix 2) of the NYSDOH Soil Vapor Intrusion Guidance and EPA BASE 90<sup>th</sup> percentile value, which provides a means of comparison to background conditions. TCE detections of 1,200 ug/m<sup>3</sup> and 66,000 ug/m<sup>3</sup> were recorded at locations SV-11 and SV-12, respectively, above the action levels in Matrix 1. For PCE, two detections of 5.5 and 7.8 ug/m<sup>3</sup> were both below the lowest action level of 100 ug/m<sup>3</sup> in Matrix 2 and also below the EPA BASE 90<sup>th</sup> percentile value of 15.9 ug/m<sup>3</sup>. 1,1,1-trichloroethane (TCA) was not detected in any of the samples. Carbon tetrachloride was detected in one sample at a concentration of 0.53 ug/m<sup>3</sup>, which was similar to the outdoor air samples. At location SV-12, a value of 11,000 ug/m<sup>3</sup> was recorded for cis-1,2-dichloroethene (DCE), a breakdown product of TCE. Toluene was detected in all samples with a maximum value of 3,300 ug/m<sup>3</sup> at location SV-12. Cyclohexane was detected in all but one of the samples with a maximum value of 170 ug/m<sup>3</sup> at location SV-11.

#### Indoor Air Samples

Indoor air analytical results and guidance values included in Table 3.1 of the NYSDOH Soil Vapor Intrusion Guidance are included in Table 2. There were no exceedences of the guidance values for either PCE (100 ug/m<sup>3</sup>) or TCE (5 ug/m<sup>3</sup>). Toluene was detected at all locations with the highest values of 31 ug/m<sup>3</sup> and 19 ug/m<sup>3</sup> at locations SV-13 (Motion Labs) and SV-14 (Polymedco warehouse), respectively. The only other detection greater than 10 ug/m<sup>3</sup> in indoor air samples was for n-heptane with a value of 17 ug/m<sup>3</sup> at location SV-13. With a subslab value of 31 ug/m<sup>3</sup> at this location, the indoor air detection is unlikely to be as a result of vapor intrusion and more likely associated with the sources of VOCs in at Motion Labs detailed above. All detections of other compounds were at levels similar to the outdoor air samples and below the EPA BASE 90<sup>th</sup> percentile values.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

No indoor air values for TCE were above the air guidance value of  $5\text{ug}/\text{m}^3$  in Table 3.1 of the NYSDOH Soil Vapor Intrusion Guidance. Although there is no evidence of exposure to workers at the site based upon the indoor air sampling results, the elevated concentrations of TCE, and to a lesser extent 1,2-DCE and toluene, were detected in the subslab soil gas beneath the Polymedco office area. The updated feasibility should evaluate subslab vapor mitigation to prevent potential future vapor intrusion.

The indoor air sample for SV-13 was taken within the Motion Labs building where a number of possible sources of toluene were present as detailed in section 3.2, and the detected concentration was below the EPA based 90<sup>th</sup> percentile. Sampling data at locations SV-14 and SV-15 demonstrate that soil vapor intrusion is not occurring and that the potential for soil vapor intrusion to occur is not likely. The detection of  $19\text{ug}/\text{m}^3$  at location SV-14 is three times the subslab value and unlikely to be as a result of vapor intrusion. No further action is recommended in the Polymedco, Motion Labs, and International Purchasing Systems warehouse buildings where these samples were collected.

## 6.0 REFERENCES

Foster Wheeler Environmental Corporation; *Remedial Investigation/Feasibility Study (RI/FS), Magna Metals Site*, Cortlandt, New York; June 1998.

Tetra Tech FS, Inc.; *Draft Supplements Remedial Investigation Report, Magna Metals Site*, Cortlandt, New York; August 2004.

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New York State Department of Environmental Conservation, Division of Environmental Remediation, *DER-13/Strategy for Evaluating Soil Vapor Intrusion at Remedial Sites in New York*, October 2006.

New York State Department of Environmental Conservation, Division of Environmental Remediation, *Draft DER-10/Technical Guidance for Site Investigation and Remediation*, December 2002.

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## TABLES

**Table 1**  
**Magna Metals**  
New York, NY  
Soil Vapor Analytical Results

Client ID Date Sampled Lab Sample ID Units	NYSDOH Soil Vapor Intrusion Guidance Values (ug/m3)	EPA BASE 90th percentile (ug/m3)	SV-13 DUP(S.S) 4/5/2007 17:06 JTPH11AD ug/m3	SV-11(S.S) 4/5/2007 16:34 JTPG31AD ug/m3	SV-12(S.S) 4/5/2007 16:38 JTPHF1AD ug/m3	SV-13(S.S) 4/5/2007 17:06 JTPH51AD ug/m3	SV-14(S.S) 4/5/2007 17:28 JTPH91AD ug/m3	SV-15(S.S) 4/5/2007 16:56 JTPJG1AD ug/m3
Compound								
1,1,1-Trichloroethane	100/1000	20.6	4.4 U	8.7 U	680 U	4.4 U	0.87 U	0.87 U
1,1,2,2-Tetrachloroethane		20.6	5.5 U	11 U	860 U	5.5 U	1.1 U	1.1 U
1,1,2-Trichloroethane		<1.5	4.4 U	8.7 U	680 U	4.4 U	0.87 U	0.87 U
1,1-Dichloroethane		<0.7	3.2 U	6.5 U	500 U	3.2 U	0.65 U	0.65 U
1,2-Dichloroethane (EDB)		<1.4	3.2 U	6.3 U	490 U	3.2 U	0.63 U	0.63 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane		<1.5	6.1 U	12 U	960 U	6.1 U	1.2 U	1.2 U
1,2-Dichloroethane		<1.5	5.6 U	11 U	870 U	5.6 U	1.1 U	1.1 U
1,2-Dichloropropane		<0.9	3.2 U	6.5 U	500 U	3.2 U	0.65 U	0.65 U
1,3,5-Trimethylbenzene		<1.6	3.7 U	7.4 U	580 U	3.7 U	0.74 U	0.74 U
1,3-Butadiene		3.7	3.9 U	7.9 U	610 U	3.9 U	0.79 U	0.79 U
2,2,4-Trimethylpentane		<3.0	3.5 U	7.1 U	550 U	3.5 U	0.71 U	0.71 U
3-Chloropropene		<4.8	9.3 U	19 U	1500 U	9.3 U	1.9 U	1.9 U
4-Ethyltoluene		250	2.5 U	5 U	390 U	2.5 U	0.5 U	0.5 U
Benzene		3.6	7.9 U	16 U	1200 U	7.9 U	1.6 U	1.6 U
Bromodichloromethane		9.4	2.6 U	5.1 U	400 U	2.9 U	2.6 U	2.2 U
Bromoform		<6.8	5.4 U	11 U	840 U	5.4 U	1.1 U	1.1 U
Bromomethane		<1.7	8.3 U	17 U	1300 U	8.3 U	1.7 U	1.7 U
Carbon tetrachloride	5/50/250	<1.3	3.1 U	6.2 U	480 U	3.1 U	0.62 U	0.62 U
Chloroethane		<1.1	2.5 U	5 U	390 U	2.5 U	0.5 U	0.53 U
cis-1,2-Dichloroethane		1.1	2.1 U	4.2 U	330 U	2.1 U	0.42 U	0.42 U
cis-1,3-Dichloropropene		<1.9	3.9 U	7.8 U	610 U	3.9 U	0.78 U	0.78 U
Cyclohexane		<2.3	3.2 U	6.3 U	1100 U	3.2 U	0.63 U	0.63 U
Dibromochloromethane		<2.3	3.6 U	7.3 U	570 U	3.6 U	0.73 U	0.73 U
Dichlorodifluoromethane		<2.3	87	170	1100 U	97	17	56
Ethylbenzene		16.5	6.8 U	14 U	1100 U	6.8 U	1.4 U	1.4 U
Methyl tert-butyl ether		5.7	4 U	7.9 U	620 U	4 U	2.3 U	3.2 U
m-Xylene & p-Xylene		22.2	6.1	6.9 U	540 U	9.4	0.69 U	0.69 U
n-Heptane		10	14	29 U	2200 U	14 U	3.3 U	4.4 U
o-Xylene		<3.6	27	16 U	540 U	22	0.69 U	0.69 U
Tetrachloroethane		10.2	86	84	1300 U	31	1.8 U	1.6 U
Toluene	100/1000	7.9	6.1	6.9 U	540 U	9.6	0.69 U	0.69 U
trans-1,2-Dichloroethane		15.9	5.5	11 U	850 U	7.8	1.1 U	1.1 U
trans-1,3-Dichloropropene		43	450	450	3300 U	600	6.2 U	19 U
Trichloroethane		<1.3	3.2 U	6.3 U	490 U	3.2 U	0.63 U	0.63 U
Trichlorofluoromethane	5/50/250	4.2	3.6 U	7.3 U	570 U	3.6 U	0.73 U	0.73 U
Vinyl bromide		18.1	3.9	1200	66000	4.8 U	0.46	0.43 U
Vinyl chloride		3.5	4.5 U	9 U	700 U	4.5 U	1.5	2.3 U
		<1.9	3.5 U	7 U	550 U	3.5 U	0.7 U	0.7 U
			2 U	4.1 U	320 U	2 U	0.41 U	0.41 U

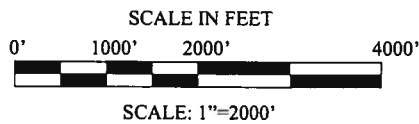
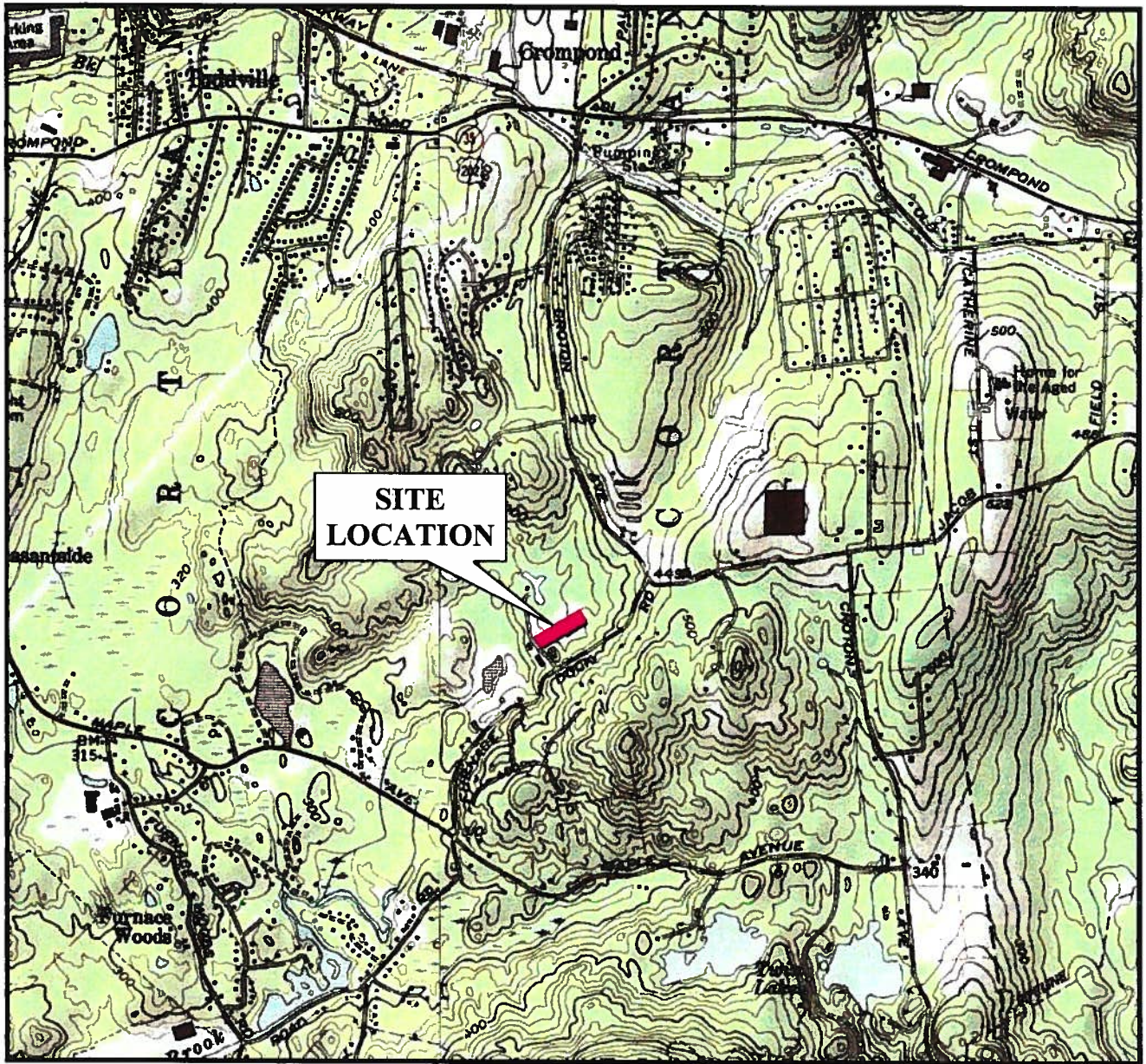
Soil vapor guidance values for monitoring and mitigation presented in Matrices 1 & 2 of New York State Department of Health  
Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006.

**Table 2**  
Magna Metals  
New York, NY  
Indoor Air Analytical Results

Client ID Date Sampled Lab Sample ID Units	NYSDOH Indoor Air Guidance Value (ug/m3)	EPA BASE 90th percentile (ug/m3)	OUTDOOR 1 (A.A) 4/5/2007 17:40 JTPJM1AD ug/m3	OUTDOOR 2 (A.A) 4/5/2007 18:10 JTPJR1AD ug/m3	SV-10(A.A) 4/5/2007 16:12 JTPH1AD ug/m3	SV-11(A.A) 4/5/2007 16:07 JTPH1AD ug/m3	SV-12(A.A) 4/5/2007 18:15 JTPH1AD ug/m3	SV-13(A.A) 4/5/2007 17:10 JTPH1AD ug/m3	SV-14(A.A) 4/5/2007 17:20 JTPH1AD ug/m3	SV-15(A.A) 4/5/2007 16:55 JTPH1AD ug/m3
Compound	5	20.6	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,1-Trichloroethane		20.6	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
1,1,2,2-Tetrachloroethane		<1.5	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U
1,1,2-Trichloroethane		<0.7	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
1,1-Dichloroethane		<1.4	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
1,1-Dichloroethane (EDB)		<1.5	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
1,2-Dibromoethane		<1.5	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U	0.56 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane		<0.9	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
1,2-Dichloroethane		<1.6	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
1,2-Dichloropropane		3.7	0.39 U	0.39 U	1.2	1.2	0.78	1.7	0.7	0.71
1,3,5-Trimethylbenzene		<3.0	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
1,3-Butadiene		<4.8	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U	0.93 U
2,2,4-Trimethylpentane		250	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
3-Chloropropene		3.6	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U
4-Ethyltoluene		9.4	0.48	0.91	0.57	0.55	0.71	1.1	1.5	0.77
Benzene		<6.8	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
Bromodichloromethane		<1.7	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U	0.31 U
Bromoform		<1.3	0.51	0.66	0.56	0.53	0.51	0.47	0.77	0.54
Carbon tetrachloride	100	<1.1	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
Chloroethane		1.1	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U	0.39 U
Chloroform		<1.9	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
cis-1,2-Dichloroethane		<2.3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
cis-1,3-Dichloropropene		<2.3	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
Cyclohexane		<2.3	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
Dibromochloromethane		16.5	2.2	3.2	2.6	2.3	2.2	2.1	3.6	2.2
Dichlorodifluoromethane		5.7	0.35 U	0.35 U	0.41	0.49	0.62	1.8	3.2	1.9
Ethylbenzene		22.2	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	6	1.4 U	1.4 U
Methyl tert-butyl ether		10	0.87	0.87	1.3	1.4	1.9	5.9	7.6	4.5
m-Xylene & p-Xylene		<3.6	0.94	0.94	0.82 U	1.7	0.82 U	17	1.7	4.8
n-Heptane		10.2	0.7 U	0.76	0.7 U	0.7 U	0.7 U	0.89	1	0.7 U
n-Hexane		7.9	0.35 U	0.35 U	0.48	0.6	0.59	2	2.8	1.8
o-Xylene		15.9	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U	1.3	0.61
Tetrachloroethane	100	43	0.97	2.2	3.8	3.6	4	31	19	12
Toluene		43	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U
trans-1,2-Dichloroethane		<1.3	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U
trans-1,3-Dichloropropene		4.2	0.21 U	0.21 U	2.1	2.2	2.9	1.4	0.21 U	0.21 U
Trichloroethane	5	18.1	1.3	1.8	1.4	1.3	1.7	1.3	2.2	1.4
Trichlorofluoromethane		3.5	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Vinyl bromide		<1.9	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Vinyl chloride										

Indoor air guidance values presented in Table 3.1 and Matrices 1 & 2 of New York State Department of Health  
Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006.

## FIGURES



**SOURCE:**  
7.5 MINUTE SERIES USGS TOPOGRAPHIC MAP  
QUADRANGLE: MOHEGAN LAKE, NY 1981

**MAGNA METALS  
CORTLANDT, NEW YORK**

**PROJECT SITE LOCATION**



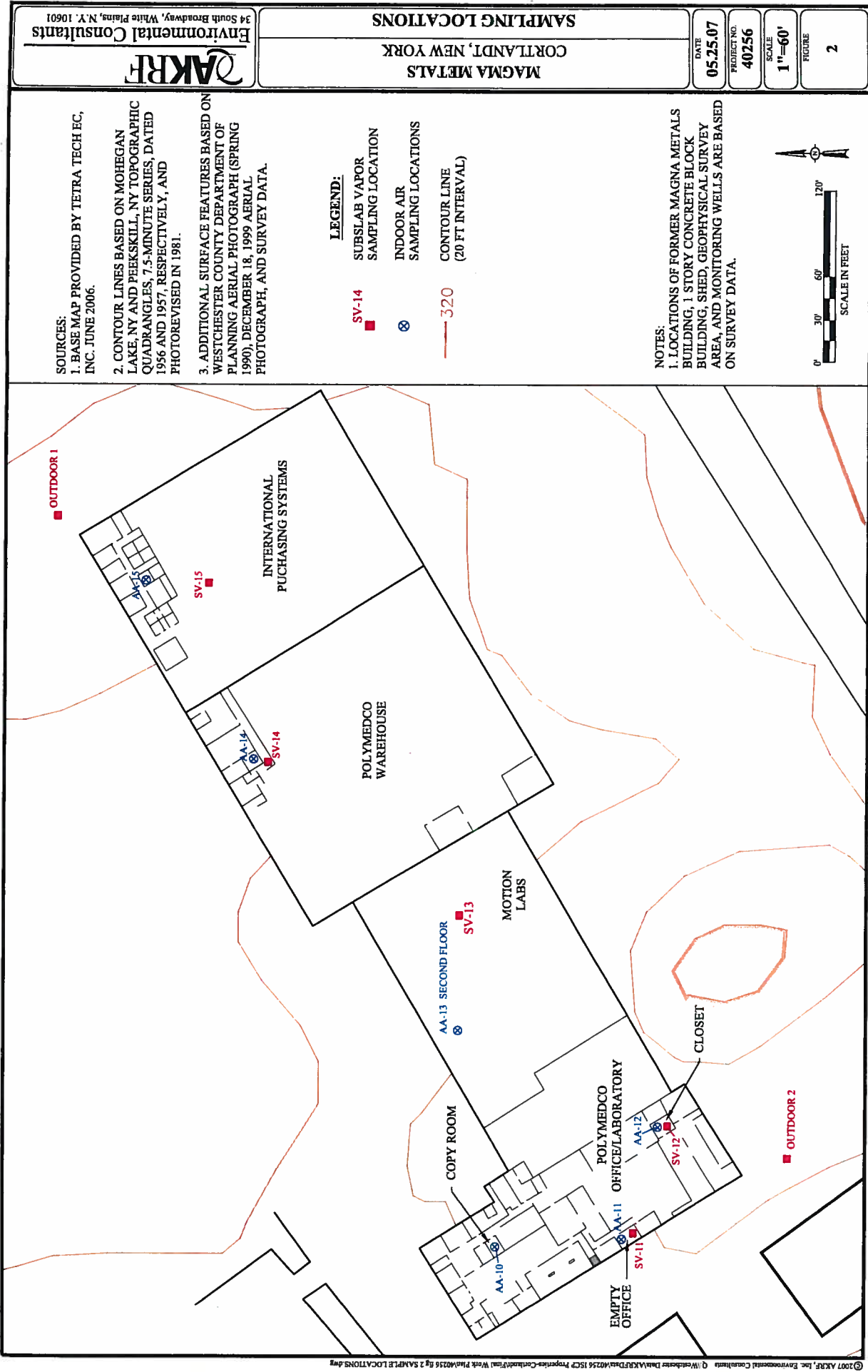
**Environmental Consultants**  
440 Park Avenue South, New York, N.Y. 10016

DATE  
**1.08.06**

PROJECT No.  
**40256**

SCALE  
**AS SHOWN**

FIGURE  
**1**



**APPENDIX A**  
**NYSDOH INDOOR AIR QUALITY QUESTIONNAIRE**  
**AND BUILDING INVENTORY FORM**

Poly Medco

NEW YORK STATE DEPARTMENT OF HEALTH  
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY  
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Bryan Zieroff Date/Time Prepared 12/16/07Preparer's Affiliation AKRF Phone No. \_\_\_\_\_Purpose of Investigation To determine SVS point locations and factors that could affect indoor air.

## 1. OCCUPANT:

Interviewed: Y/N

Last Name: De Alto First Name: Richard

Address: \_\_\_\_\_

County: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Office Phone: \_\_\_\_\_

Number of Occupants/persons at this location \_\_\_\_\_ Age of Occupants 19-65

## 2. OWNER OR LANDLORD: (Check if same as occupant \_\_\_\_\_)

Interviewed: ☒ Y / ☐ NLast Name: Dubnaly First Name: Donald

Address: \_\_\_\_\_

County: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Office Phone: \_\_\_\_\_

## 3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential  
IndustrialSchool  
ChurchCommercial/Multi-use  
Other: \_\_\_\_\_Polymedco  
Medical supplies  
since 10/91

- Polymedco

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other: _____

If multiple units, how many? \_\_\_\_\_

If the property is commercial, type?

Business Type(s) Medical Supply - Laboratory testing

Does it include residences (i.e., multi-use)? Y / N If yes, how many? \_\_\_\_\_

Other characteristics:

Number of floors 1

Building age Built late 50's

Is the building insulated? Y / N

unknown

How air tight? Tight / Average / Not Tight

#### 4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

- ONE FLOOR

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

## 5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

- a. Above grade construction: wood frame concrete Block wall / Slab Floor stone brick
- b. Basement type: full crawlspace slab other \_\_\_\_\_
- c. Basement floor: concrete dirt stone other \_\_\_\_\_
- d. Basement floor: uncovered covered covered with \_\_\_\_\_
- e. Concrete floor: unsealed sealed sealed with (Paint coating)
- f. Foundation walls: poured block stone other Wood frame interior
- g. Foundation walls: unsealed sealed sealed with \_\_\_\_\_
- h. The basement is: wet damp dry moldy
- i. The basement is: finished unfinished partially finished
- j. Sump present? Y / N
- k. Water in sump? Y / N / not applicable

Basement/Lowest level depth below grade: \_\_\_\_\_ (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Cracks in floor

## 6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation  
Space Heaters  
Electric baseboard

Heat pump  
Stream radiation  
Wood stove

Hot water baseboard  
Radiant floor  
Outdoor wood boiler

Boiler in garage  
LP supply for outdoor  
Other \_\_\_\_\_

The primary type of fuel used is:

Natural Gas  
Electric  
Wood

Fuel Oil  
Propane  
Coal

Kerosene  
Solar

Domestic hot water tank fueled by: \_\_\_\_\_

Boiler/furnace located in: Basement Outdoors Main Floor Other \_\_\_\_\_

Air conditioning: Central Air Window units Open Windows None

multiple roof top units

Are there air distribution ducts present? Y/N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

Return part of overhead hot air / AC system

## 7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement

1<sup>st</sup> Floor

2<sup>nd</sup> Floor

3<sup>rd</sup> Floor

4<sup>th</sup> Floor

Lab tenting / office / warehouse

Lab: no patient waiting  
no storage in  
work.

## 8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached loading dock - garage?

b. Does the garage have a separate heating unit?

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)

d. Has the building ever had a fire?

e. Is a kerosene or unvented gas space heater present?

f. Is there a workshop or hobby/craft area?

g. Is there smoking in the building?

h. Have cleaning products been used recently?

i. Have cosmetic products been used recently?

Y/N

Y/N/NA

Y/N/NA

Please specify

Y/N When?

Y/N Where?

Y/N Where & Type?

Y/N How frequently?

Y/N When & Type?

Y/N When & Type?

External steam boilers

Maintenance area  
janitorial - from office

- j. Has painting/staining been done in the last 6 months? Y ☒ N Where & When? \_\_\_\_\_
- k. Is there new carpet, drapes or other textiles? Y ☒ N Where & When? \_\_\_\_\_
- l. Have air fresheners been used recently? Y ☒ N When & Type? Bathroom - frequent
- m. Is there a kitchen exhaust fan? Y ☒ N If yes, where vented? \_\_\_\_\_
- n. Is there a bathroom exhaust fan? Y ☒ N If yes, where vented? \_\_\_\_\_
- o. Is there a clothes dryer? Y ☒ N If yes, is it vented outside? Y / N
- p. Has there been a pesticide application? Y ☒ N When & Type? 1 month ago - outdoor
- Are there odors in the building? Y / N  
If yes, please describe: \_\_\_\_\_

Do any of the building occupants use solvents at work? Y ☒ N  
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? \_\_\_\_\_

If yes, are their clothes washed at work? Y / N

Lab coats laundered - not dry cleaned

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

home employees  
Yes, use dry-cleaning regularly (weekly)

Yes, use dry-cleaning infrequently (monthly or less)

Yes, work at a dry-cleaning service

No

Unknown

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: \_\_\_\_\_

Is the system active or passive? Active/Passive

## 9. WATER AND SEWAGE

Water Supply: Public Water Drilled Well Driven Well Dug Well Other: \_\_\_\_\_

Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other: \_\_\_\_\_

## 10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: \_\_\_\_\_

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

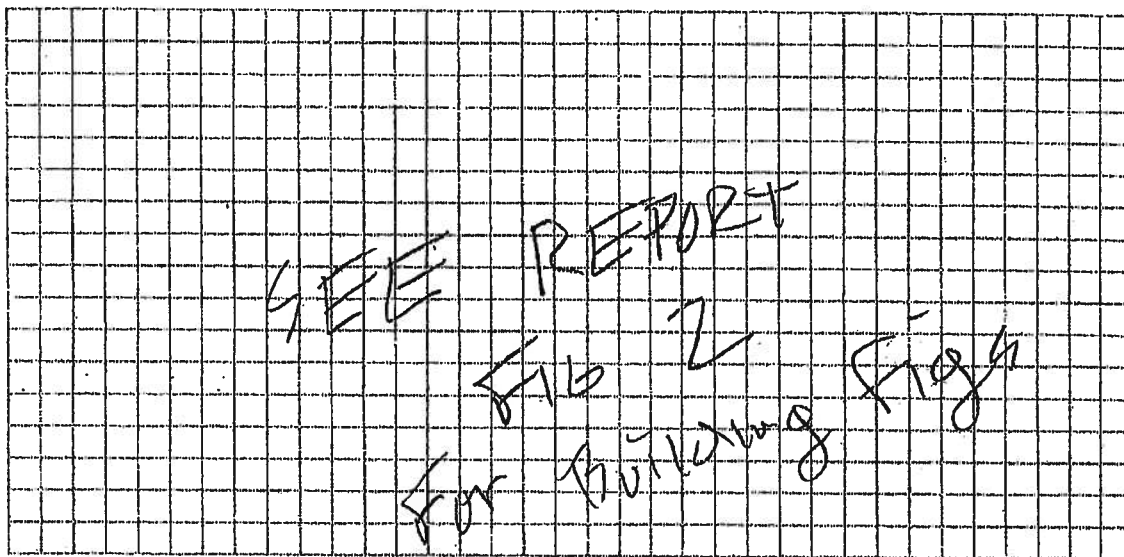
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

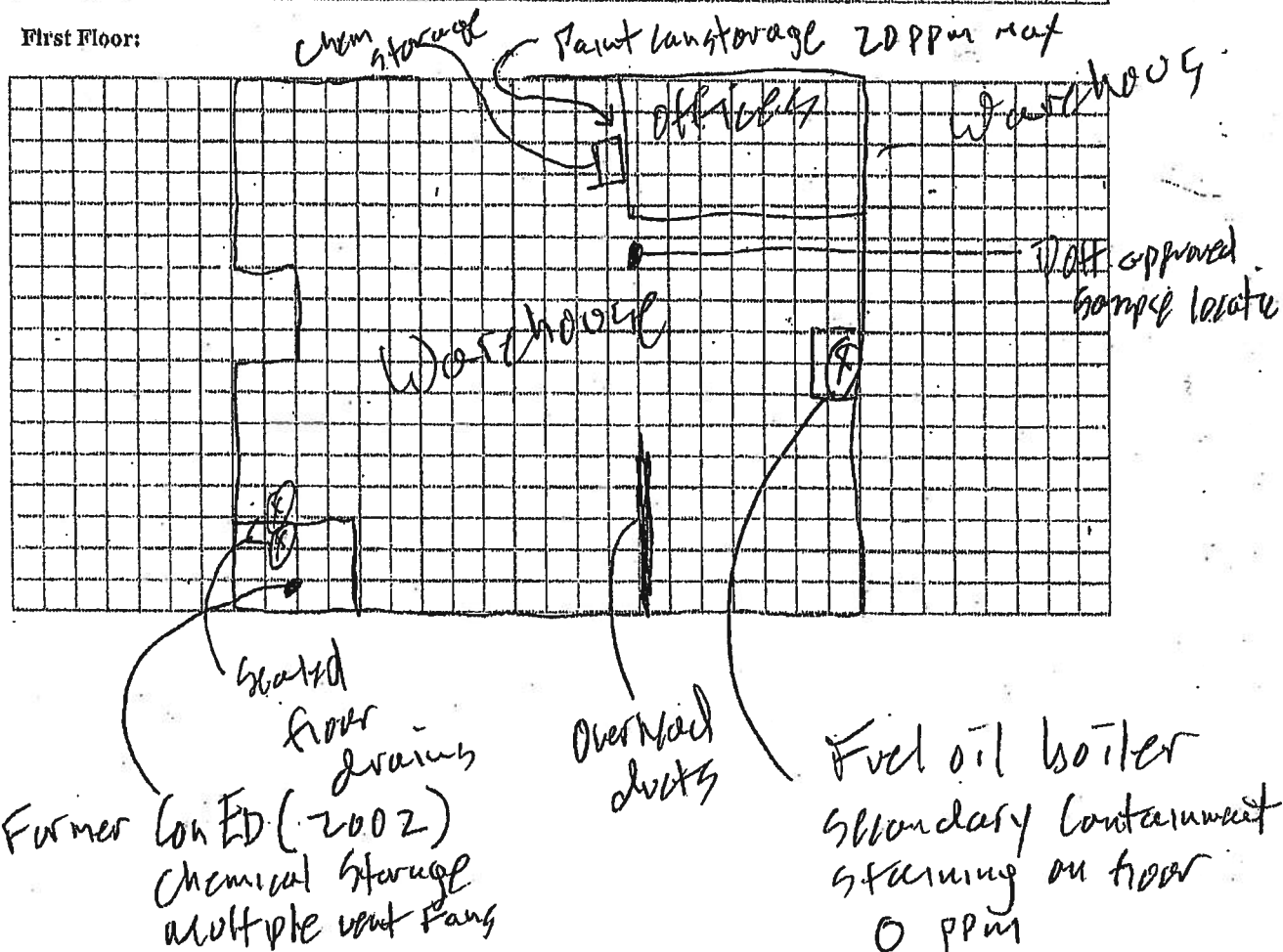
## 11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:



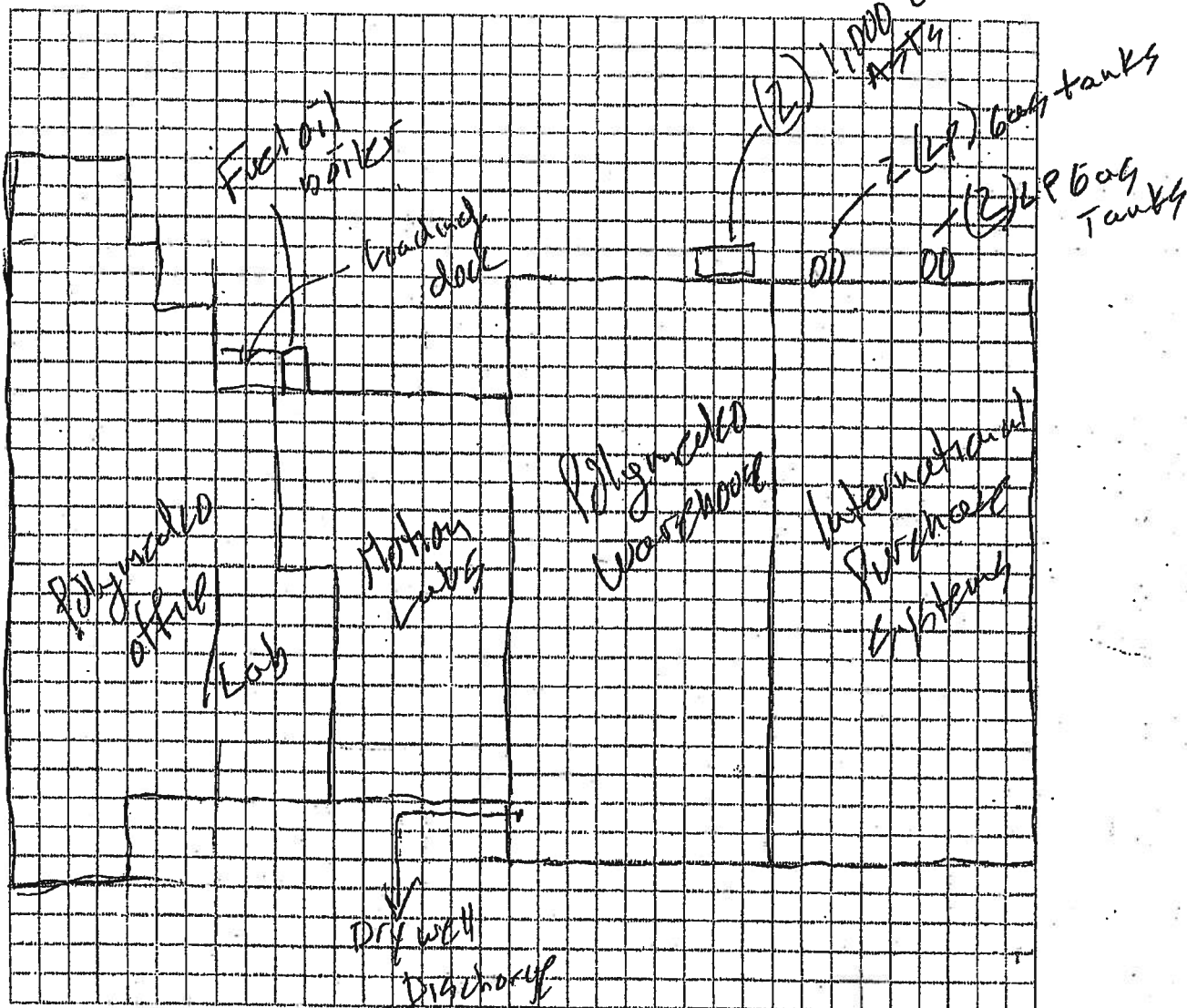
First Floor:



## 12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



For Entire building

- \* Polymedco
- \* Motion Labs &
- \* International Purchasing Systems

### 13. PRODUCT INVENTORY FORM

**Make & Model of field instrument used:**

Mini Lat 2000 PID

**List specific products found in the residence that have the potential to affect indoor air quality.**

[illegible]

\* Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

\*\* Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

POLY MEDCO'S WAREHOUSE  
CHEMICAL LIST

(P3)

CLOROX / CLOROX WIPES  
ZEP / CITRUS CLEANER AND DEGREASER  
PEAK / WINDSHIELD WASH  
BLUE CORAL / CAR WASH AND WAX CLEANER  
PINE SOL / DISINFECTANT CLEANER  
PAINT THINNER  
GREAT STUFF / FOAM SEALANT  
UGL / DRYLOK ETCH MASONRY CLEANER  
THERMATE / DEFOAMER  
THERMATE / STEAM CARPET CLEANER  
ZEP / UPHOLSTERY CLEANER  
ZIP STRIP / PAINT REMOVER  
OATEY / PVC PRIMER  
OATEY / PVC CEMENT  
KF / BOWL AND BATHROOM DISINFECTANT  
HENRY / CERAMIC TILE ADHESIVE  
PRE MIXED TILE GROUT  
OOPS / MULTIPURPOSE REMOVER  
NO 7 / POLISHING COMPOUND  
RUSTOLEUM / SPRAY PAINT  
RUSTOLEUM / PRIMER  
PAINTER'S TOUCH / SPRAY PAINT  
XYLENE  
MULTI PURPOSE GREASE  
REVERE / CRETE-ETCH  
BEHR FLOOR PAINT  
BEHR / PRIMER

POLYMEDCO'S CHEMICAL LIST (OFFICE) (P1)  
CLOROX / DISINFECTING WIPES  
LYSOL / DISINFECTANT SPRAY  
AIR WICK WIZARD / SPRAY  
PLEDGE / WOOD POLISH  
WINDEX / WINDOW CLEANER  
409 / GLASS AND SURFACE CLEANER  
ZEP CITRUS / CLEANER AND DEGREASER  
MURPHY / OIL SOAP  
NOVUS / PLASTIC POLISH  
SNELL / HOSPITAL DISINFECTANT SPRAY  
DIRTEX / SPRAY CLEANER  
GUARDSMAN / WAX REMOVER WOOD CLEANER  
SHEETROCK JOIN COMPOUND  
PIVOT / HEAVY DUTY LIQUID DETERGENT  
RUB DOCTOR / STEAM CLEANER  
RUB DOCTOR / ANTI-FOAM  
RUB DOCTOR / HITRAFFIC PRE-TREATMENT  
ZEP / UPHOLSTERY CLEANER  
ICF / DISINFECTANT BOWL AND BATHROOM CLEANER  
CLR / CALCIUM, LIME, RUST REMOVER  
GOOF OFF / REMOVER  
WD 40 / 3 IN 1 OIL / TURTLEWAX / REMOVER  
ARMOR ALL / PROTECTANT  
STP / FUEL INJECTOR CLEANER  
STP / GAS TREATMENT  
3M SUPER 77 / MULTIPURPOSE ADHESIVE  
3M SPRAY MOUNT / ARTIST ADHESIVE  
KRYLON / VARNISH SPRAY  
ROBERTS / SEAM SEALER

## OSS CLEANING CO. CHEMICAL LIST

SP. SPL. ELITE / GLASS AND WINDOW CLEANER

PRONTO / NON ACID DISINFECTANT BOWL AND  
BATHROOM CLEANER

JAN. Q. PUBLIC / NON ACID DISINFECTANT BOWL AND  
BATHROOM CLEANER

SOLUTION SERIES SUNSHINE / NEUTRAL ALL PURPOSE  
CLEANER

PROSAIL UNITECH / UNIVERSAL CLEANER

PROSAIL STERLING / STAINLESS STEEL AND METAL POLISH  
WINDEX / WINDOW CLEANER

LEMON PLUS / NEUTRAL ALL PURPOSE FLOOR AND WALL  
CLEANER

SOLUTION SERIES / PINK LOTION HAND SOAP

PROSAIL / RICH WOOD POLISH

SPECTROWAX / FURNITURE CLEANER AND POLISH

OLD DUTCH / CLEANER

PROSAIL / CLINI CLEAN FOAMING DISINFECTANT

SOLUTION SERIES / WINDOW AND GLASS CLEANER

GREAT VALUE / ALL PURPOSE CLEANER

PEAK / WINDSHIELD WASH

EZ / TURPENTINE

REAL KILL / WASP AND HORNET KILLER

SHOO FLY / HORNET KILLER

RAID / ANT AND ROACH KILLER

STRAIT LINE / MARKING CHALK

OATEY PLUMBER'S PUTTY

PAINT

RUST-OLEUM / TRAFFIC STRIPING PAINT

BEHR PAINT LATEX / KILZ 2 / STAINBLOCKER

BENJAMIN MOORE LATEX

PAINTER'S TOUCH LATEX

RUST-OLEUM LATEX

RUST-OLEUM SPRAY PAINT

KRYLON SPRAY PAINT

REVERE / EPOXI COAT FLOOR PAINT WATER BASE

DAP / CAULK

PHENOSEAL VINYL ADHESIVE CAULK

STA-BIL / CONCENTRATED FUEL STABILIZER

BERNZOMATIC / PROPANE

EXPO / WHITE BOARD CLEANER

TILKI / TORCH FUEL

EZ / BOILED LINSEED OIL

COROX. / COROX CLEAN UP / COROX TOILET BOWL CLEANER

SOFT SCRUB / BLEACH CLEANSER

PALMOLIVE / DISHWASHING LIQUID

HOME SELECT / DISHWASHING LIQUID

PALMOLIVE / DISHWASHER DETERGENT

CASCADE / DISHWASHER DETERGENT

ZEP / STAINLESS STEEL CLEANER

ELECTRASO / DISHWASHER JET DRY POLYMER II

WAREHOUSE

(P4)

ZIP / ORANGE HAND CLEANER

GREAT VALUE / BLEACH

DAWN / DISHWASHING LIQUID

GUARDSMAN / WOOD POLISH

Motion LABS

NEW YORK STATE DEPARTMENT OF HEALTH  
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY  
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing:

Preparer's Name Bryan Zewoff Date/Time Prepared \_\_\_\_\_

Preparer's Affiliation AAEF Phone No. \_\_\_\_\_

Purpose of Investigation To determine gvh point locations and factors that could influence indoor air.

## 1. OCCUPANT:

Interviewed: ☒ Y Motion LABS

Pete Heaman  
TS059

Last Name: Coppollecchia First Name: John

Address: \_\_\_\_\_

County: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Office Phone: \_\_\_\_\_

Number of Occupants/persons at this location 40 Age of Occupants 18-65  
800-4-30 shift

2. OWNER OR LANDLORD: (Check if same as occupant ☐)

Interviewed: ☒ Y ☐ N

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Address: \_\_\_\_\_

County: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Office Phone: \_\_\_\_\_

## 3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential  
Industrial

School  
Church

☒ Commercial/Multi-use  
Other: \_\_\_\_\_

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other: _____

If multiple units, how many? \_\_\_\_\_

If the property is commercial, type?

Business Type(s) Motion Labs

Does it include residences (i.e., multi-use)? Y / N

If yes, how many? \_\_\_\_\_

Other characteristics:

Number of floors 2

Building age 50 yrs

Is the building insulated? Y / N

How air tight? Tight / Average / Not Tight

*Manufacture small power  
equipment for entertainment  
business - sound/power  
cords  
lighting*

#### 4. ~~AIRFLOW~~

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

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Airflow near source

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---

Outdoor air infiltration

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Infiltration into air ducts

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## 5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

- a. Above grade construction: wood frame concrete stone brick
- b. Basement type: full crawlspace slab other \_\_\_\_\_
- c. Basement floor: concrete dirt stone other \_\_\_\_\_
- d. Basement floor: uncovered covered covered with \_\_\_\_\_
- e. Concrete floor: unsealed sealed sealed with \_\_\_\_\_
- f. Foundation walls: poured block stone other \_\_\_\_\_
- g. Foundation walls: unsealed sealed sealed with \_\_\_\_\_
- h. The basement is: wet damp dry moldy
- i. The basement is: finished unfinished partially finished
- j. Sump present? Y / N
- k. Water in sump? Y / N / not applicable

Basement/Lowest level depth below grade: \_\_\_\_\_ (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

cracks in concrete slab of First Floor

## 6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply - note primary)

Hot air circulation  
Space Heaters  
Electric baseboard

Heat pump  
Stream radiation  
Wood stove

Hot water baseboard  
Radiant floor  
Outdoor wood boiler Other \_\_\_\_\_

The primary type of fuel used is:

Natural Gas  
Electric  
Wood

Fuel Oil  
Propane  
Coal

Kerosene  
Solar

Domestic hot water tank fueled by: \_\_\_\_\_

Boiler/furnace located in: Basement Outdoors Main Floor Other \_\_\_\_\_

Air conditioning: Central Air Window units Open Windows None

2 air returns

4 units - 2 roof - 2 interior down stairs

Are there air distribution ducts present? Y/N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

2 returning to roof ac's  
overhead ducts for heating  
2 exhaust fans in bathroom - ceiling exhaust fans on 1<sup>st</sup> & 2<sup>nd</sup> floor  
Boiler access outside - some room/shower/polyurethane

## 7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement

1<sup>st</sup> Floor

2<sup>nd</sup> Floor

3<sup>rd</sup> Floor

4<sup>th</sup> Floor

Machine shop - shipping/receiving  
manufacturing inventory

## 8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage?

Y/N

b. Does the garage have a separate heating unit?

Y/N/NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)

Y/N/NA

Please specify \_\_\_\_\_

d. Has the building ever had a fire?

Y/N When? \_\_\_\_\_

e. Is a kerosene or unvented gas space heater present?

Y/N Where? \_\_\_\_\_

f. Is there a workshop or hobby/craft area?

Y/N Where & Type? \_\_\_\_\_

g. Is there smoking in the building?

Y/N How frequently? Limited 2<sup>nd</sup> floor

h. Have cleaning products been used recently?

Y/N When & Type? \_\_\_\_\_

i. Have cosmetic products been used recently?

Y/N When & Type? \_\_\_\_\_

j. Has painting/staining been done in the last 6 months?

☒ Y / ☐ N Where & When? spray paint burlap

k. Is there new carpet, drapes or other textiles?

Y / N Where & When? hangs over/week for

l. Have air fresheners been used recently?

☒ Y / ☐ N When & Type? shipping cables

m. Is there a kitchen exhaust fan?

☒ Y / ☐ N If yes, where vented? overhead on 2nd floor

n. Is there a bathroom exhaust fan?

☒ Y / ☐ N If yes, where vented? \_\_\_\_\_

o. Is there a clothes dryer?

☒ Y / ☐ N If yes, is it vented outside? Y / N

p. Has there been a pesticide application?

☒ Y / ☐ N When & Type? exterminator 1 month ago  
went in building

Are there odors in the building?

Y / N

If yes, please describe: \_\_\_\_\_

Do any of the building occupants use solvents at work? Y / N

(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used?

machines - car / oil - cutting oil  
alcohol cleaners  
water tumbler  
soldering

If yes, are their clothes washed at work?

Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

garments sent out to be cleaned / cleaned and sized.  
spraying like for cable assembly

Yes, use dry-cleaning regularly (weekly)

No

Yes, use dry-cleaning infrequently (monthly or less)

Unknown

Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: \_\_\_\_\_

Is the system active or passive? Active/Passive

## 9. WATER AND SEWAGE

Water Supply:

☒ Public Water

☐ Drilled Well

☐ Driven Well

☐ Dug Well

Other: \_\_\_\_\_

Sewage Disposal:

☐ Public Sewer

☒ Septic Tank

☒ Leach Field

☐ Dry Well

Other: \_\_\_\_\_

## 10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: \_\_\_\_\_

b. Residents choose to: remain in home

relocate to friends/family

relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained?

Y / N

d. Relocation package provided and explained to residents?

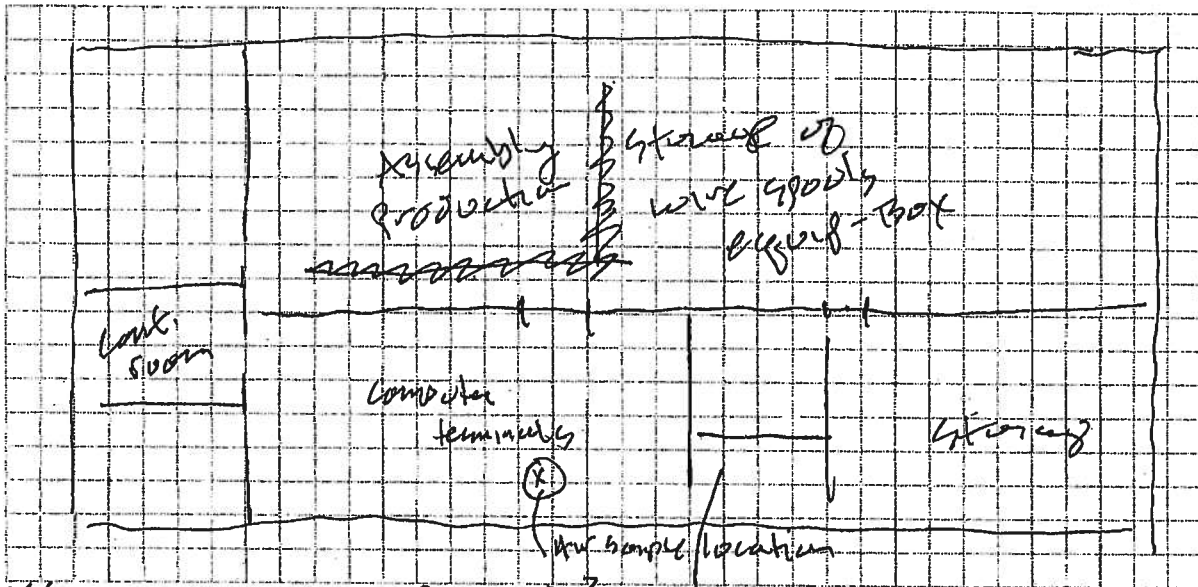
Y / N

## 11. FLOOR PLANS

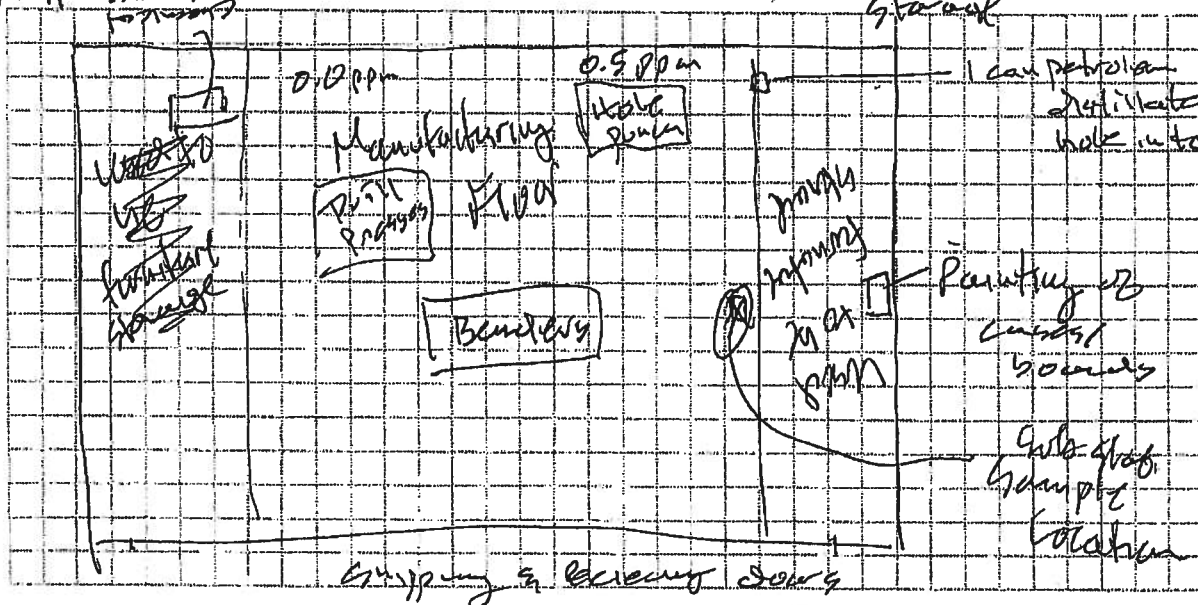
Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

First Floor  
Basement: *None*

*Fume extractors  
w/ Treatment for solder*



Basement  
First Floor:



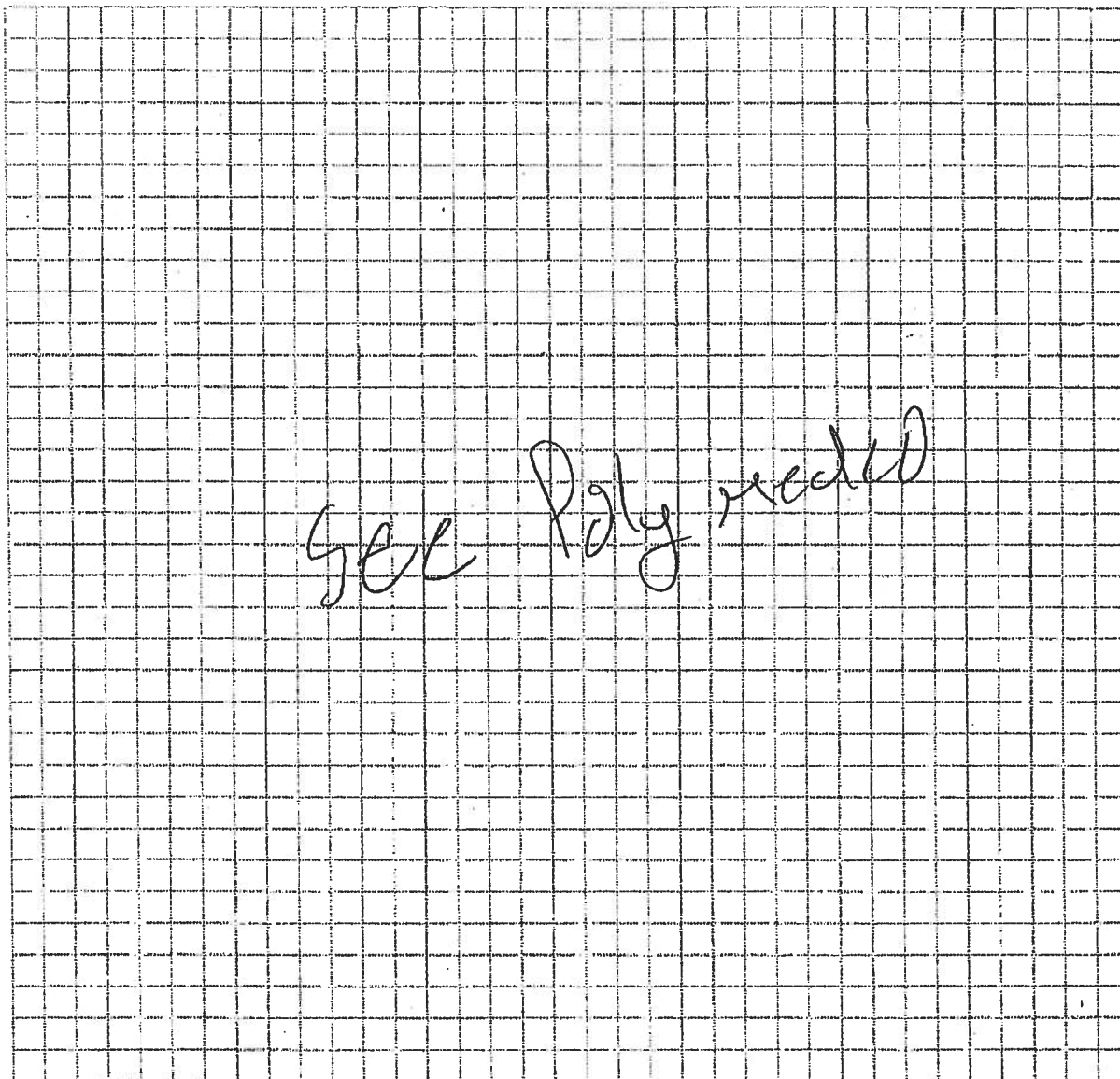
*XEROX*

12,000 ft²

## 12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



# 13. PRODUCT INVENTORY FORM

Make & Model of field instrument used:

Mimbal 2000 PID

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition *	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y/N
2 <sup>nd</sup> FL	Zip Flow heater	4 gal	U		0	
	Glenn Cleaner	4 gal	U			
	Elite ammonia	3 gal	U			
	Bleach	6 gal	U			
	Hand soap	8 gal	U		0	
	Ajax		U			
	Lysol		U			
	Soft scrub		U			
	Mr. Clean		U			
	Gray glue		U	Magnesium Titanium w/ PTFE	0	
2 <sup>nd</sup> FL	Isopropyl alcohol		U			
	Soldering Flux	1 g	U			
	DeGraesser gray		U			
	Gray paint		U		0	
	Light Aliphatic Naphthalene	5 g	U			
1 <sup>st</sup> Floor	Spray Can - Polishing		U	Petroleum distillates	0	
	Flux		U	Petroleum distillates		
	WD-40	can	U			
	Air tool cleaner	5 g	U	Petroleum distillates	0	

\* Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

\*\* Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Flammable Cabinet

kept in

- Motion labs

**List specific products found in the residence that have the potential to affect indoor air quality.**

\*\*\* Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

# International Purchasing Systems

## NEW YORK STATE DEPARTMENT OF HEALTH INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Bryan Zieroff Date/Time Prepared 12/16/07  
Preparer's Affiliation AKRF Phone No. \_\_\_\_\_

Purpose of Investigation To determine SVS point locations and factors that could affect indoor air.

### 1. OCCUPANT:

Interviewed: ☒ Y ☐ N

Last Name: Brooks First Name: Michael

Address: \_\_\_\_\_

County: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Office Phone: \_\_\_\_\_

Number of Occupants/persons at this location 10 Age of Occupants \_\_\_\_\_

19-5 Shift

### 2. OWNER OR LANDLORD: (Check if same as occupant \_\_\_\_\_)

Interviewed: ☒ Y ☐ N

Last Name: Dutnaler First Name: Donald

Address: \_\_\_\_\_

County: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Office Phone: \_\_\_\_\_

### 3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential  
Industrial

School  
Church

Commercial/Multi-use  
Other: \_\_\_\_\_

If the property is residential, type? (Circle appropriate response)

<del>Ranch</del>	2-Family	3-Family
<del>Raised Ranch</del>	Split Level	Colonial
<del>Cape Cod</del>	Contemporary	Mobile Home
<del>Duplex</del>	Apartment House	Townhouses/Condos
<del>Modular</del>	Log Home	Other: _____

If multiple units, how many? \_\_\_\_\_

If the property is commercial, type?

Business Type(s) dry goods warehouse shipping/receiving

Does it include residences (i.e., multi-use)? Y (N) If yes, how many? \_\_\_\_\_

Other characteristics:

Number of floors 1

Building age 50 yrs

Is the building insulated? Y / N

How air tight? Tight (Average) Not Tight

#### 4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

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Airflow near source

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Outdoor air infiltration

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Infiltration into air ducts

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## 5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

- a. Above grade construction: wood frame concrete stone brick
- b. Basement type: full crawlspace slab other \_\_\_\_\_
- c. Basement floor: concrete dirt stone other \_\_\_\_\_
- d. Basement floor: uncovered covered covered with \_\_\_\_\_
- e. Concrete floor: unsealed sealed sealed with \_\_\_\_\_
- f. Foundation walls: poured block stone other \_\_\_\_\_
- g. Foundation walls: unsealed sealed sealed with \_\_\_\_\_
- h. The basement is: wet damp dry moldy
- i. The basement is: finished unfinished partially finished
- j. Sump present? Y / N
- k. Water in sump? Y / N / not applicable

Basement/Lowest level depth below grade: \_\_\_\_\_ (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Cracks in concrete slab

## 6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply - note primary)

Hot air circulation  
Space Heaters  
Electric baseboard

Heat pump  
Steam radiation  
Wood stove

Hot water baseboard  
Radiant floor  
Outdoor wood boiler

Other \_\_\_\_\_

The primary type of fuel used is:

Natural Gas  
Electric  
Wood

Fuel Oil  
Propane  
Coal

Kerosene  
Solar

No Heat in Warehouse

Small propane system for office

Domestic hot water tank fueled by: \_\_\_\_\_

Boiler/furnace located in: Basement Outdoors Main Floor Other \_\_\_\_\_

Air conditioning: Central Air Window units Open Windows None

Are there air distribution ducts present? Y/N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

*No heat in warehouse*

## 7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)

Basement

1<sup>st</sup> Floor

2<sup>nd</sup> Floor

3<sup>rd</sup> Floor

4<sup>th</sup> Floor

*Small office - Dry Goods*

## 8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage?

Y/N

b. Does the garage have a separate heating unit?

Y/N/NA

c. Are petroloun-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, oar)

Y/N/NA

Please specify \_\_\_\_\_

d. Has the building ever had a fire?

Y/N

When? \_\_\_\_\_

e. Is a kerosene or unvented gas space heater present?

Y/N

Where? \_\_\_\_\_

f. Is there a workshop or hobby/craft area?

Y/N

Where & Type? \_\_\_\_\_

g. Is there smoking in the building?

Y/N

How frequently? \_\_\_\_\_

h. Have cleaning products been used recently?

Y/N

When & Type? *General bathroom cleaning*

i. Have cosmetic products been used recently?

Y/N

When & Type? \_\_\_\_\_

- j. Has painting/staining been done in the last 6 months? Y / N Where & When? \_\_\_\_\_
- k. Is there new carpet, drapes or other textiles? Y / N Where & When? \_\_\_\_\_
- l. Have air fresheners been used recently? Y / N When & Type? \_\_\_\_\_
- m. Is there a kitchen exhaust fan? Y / N If yes, where vented? \_\_\_\_\_
- n. Is there a bathroom exhaust fan? Y / N If yes, where vented? \_\_\_\_\_
- o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N
- p. Has there been a pesticide application? Y / N When & Type? \_\_\_\_\_
- Are there odors in the building? Y / N  
If yes, please describe: \_\_\_\_\_

Do any of the building occupants use solvents at work? Y / N  
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist)

If yes, what types of solvents are used? \_\_\_\_\_

If yes, are their clothes washed at work?

Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

- Yes, use dry-cleaning regularly (weekly)  
Yes, use dry-cleaning infrequently (monthly or less)  
Yes, work at a dry-cleaning service

No  
Unknown

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: \_\_\_\_\_  
Is the system active or passive? Active/Passive

## 9. WATER AND SEWAGE

Water Supply: Public Water Drilled Well Driven Well Dug Well Other: \_\_\_\_\_  
Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other: \_\_\_\_\_

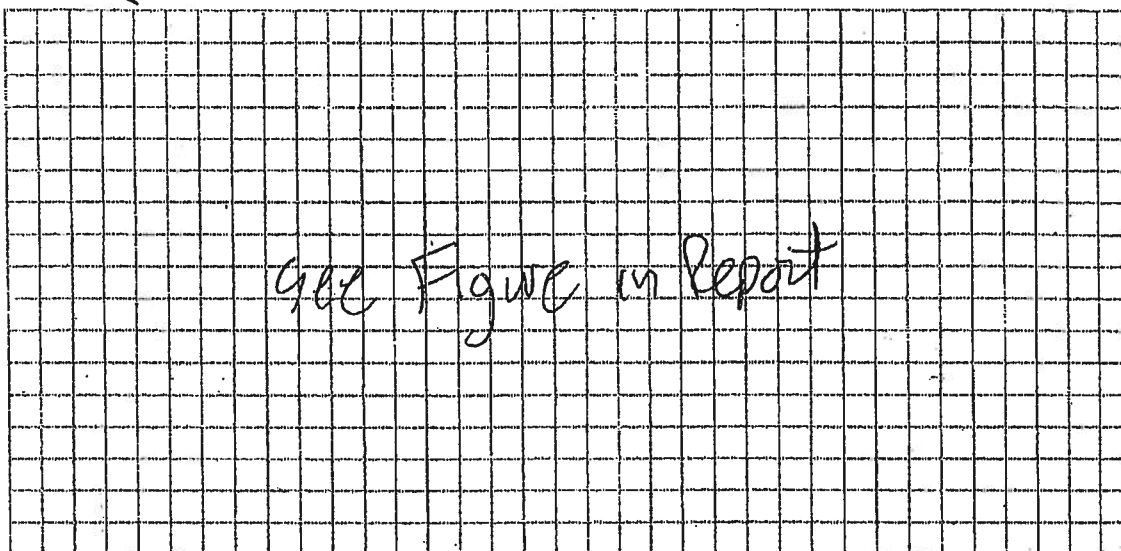
## 10. RELOCATION INFORMATION (for oil spill residential emergency)

- a. Provide reasons why relocation is recommended: \_\_\_\_\_
- b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel
- c. Responsibility for costs associated with reimbursement explained? Y / N
- d. Relocation package provided and explained to residents? Y / N

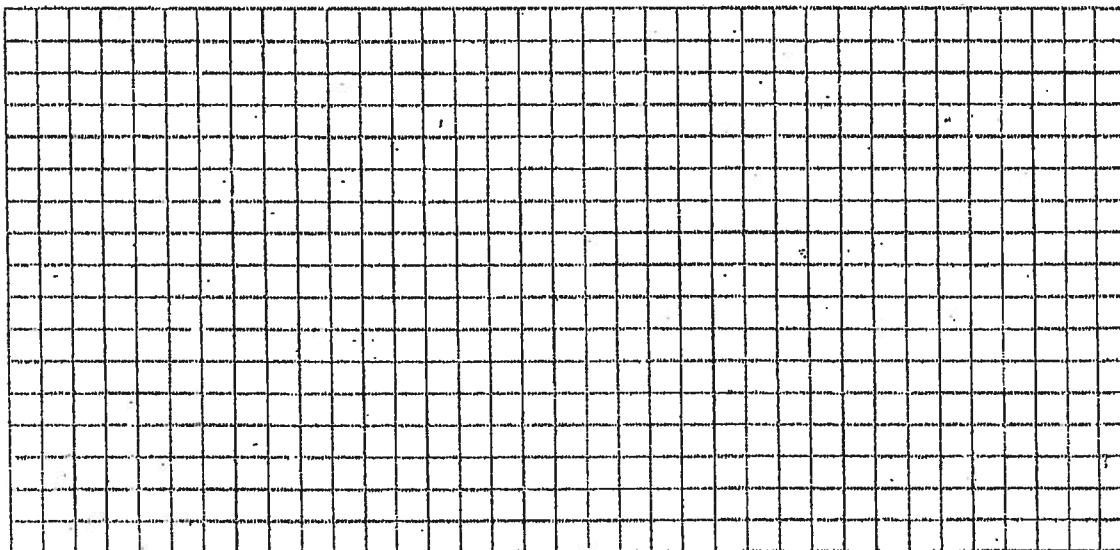
**11. FLOOR PLANS**

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

~~Basement:~~



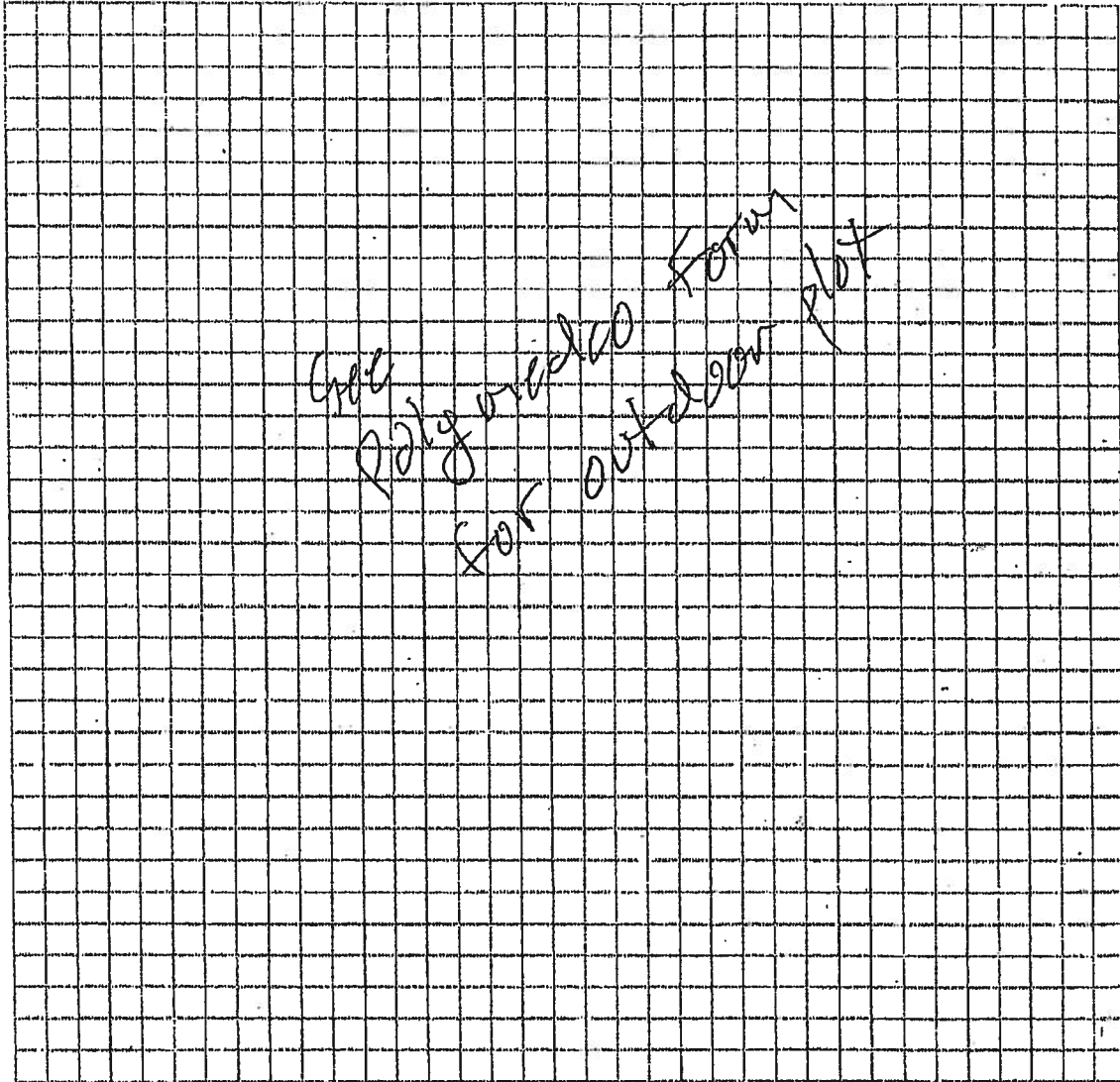
**First Floor:**



## 12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



### 13. PRODUCT INVENTORY FORM

**Make & Model of field instrument used:**

Mini Rat 2000 PID

**List specific products found in the residence that have the potential to affect indoor air quality.**

[illegible]

Tanitar Closet

\* Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)

**\*\* Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.**

# Soil Gas Sampling Log

Job No: 40256 Client: ISCP Properties  
Project Location: Magna metals, Cortlandt Sampled By: BT / BZ  
Date: April 5, 2007

Sample ID: SV-10, AA

## Purging

Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
Vol. Purged: \_\_\_\_\_ liters  
Flow Rate: \_\_\_\_\_ L/min

CANNISTER NO. 1491  
FLOW CONTROL K143

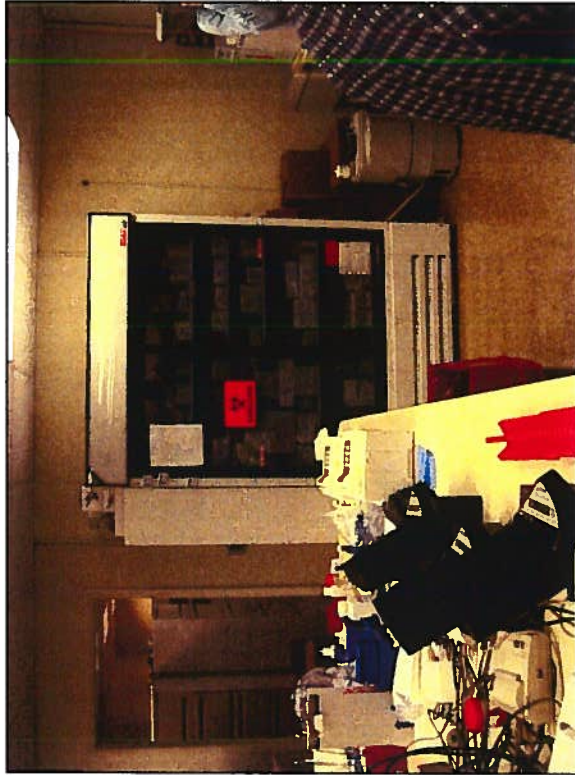
## Laboratory Sample (Summa Canister)

Time Started: 08:12 Vacuum: 28.5" Hg  
Time Stopped: 16:12 Vacuum: 7" Hg

## Field Sample

PID Calibration: \_\_\_\_\_  
Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
PID Reading: \_\_\_\_\_ ppm  
He Reading \_\_\_\_\_ %

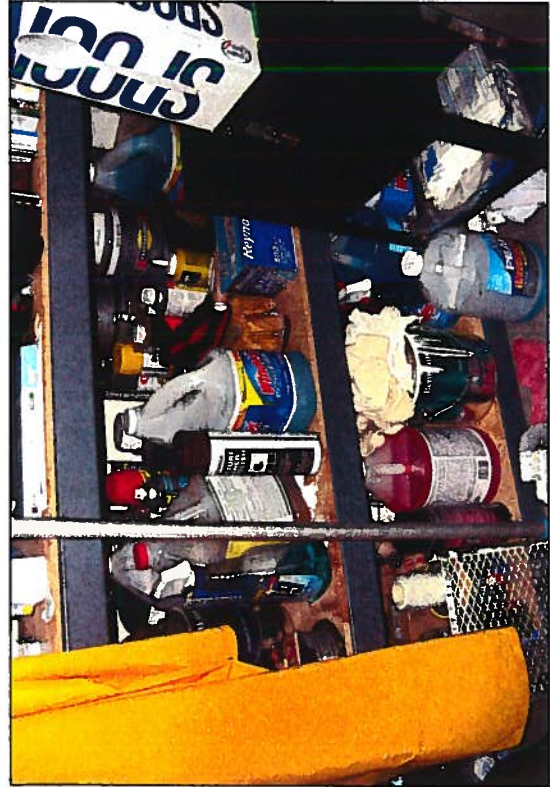
**APPENDIX B**  
**PHOTOGRAPHIC LOG**



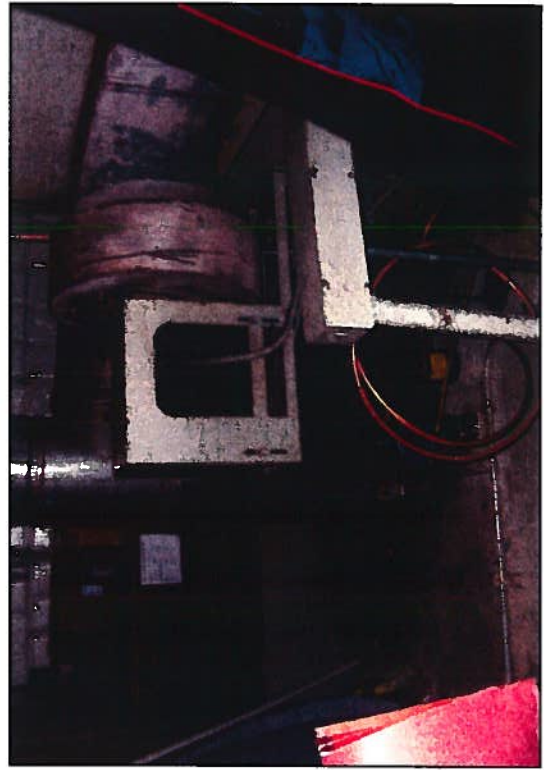
Photograph 1: Chemical storage in Polymedco laboratory.



Photograph 2: Chemical and paint storage in Polymedco loading dock room.



Photograph 3: Chemical and household cleaner storage in Polymedco loading dock room.



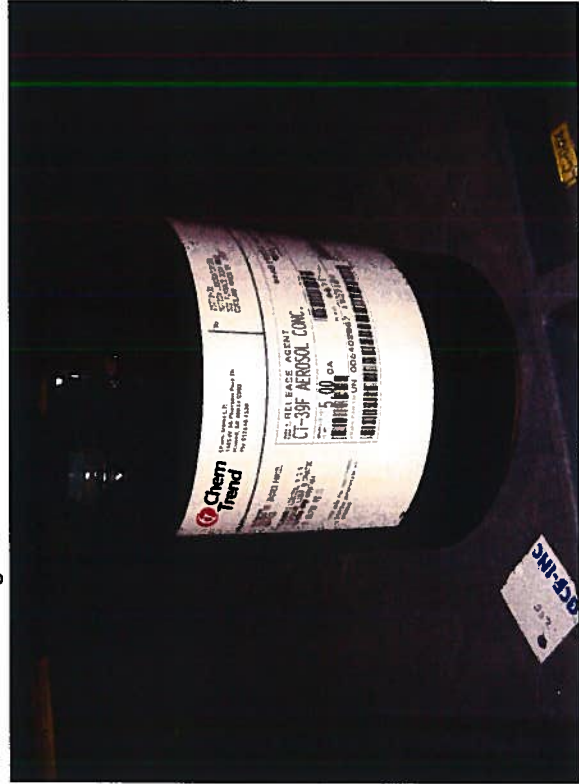
Photograph 4: Fuel oil burner with floor staining in Polymedco warehouse building.



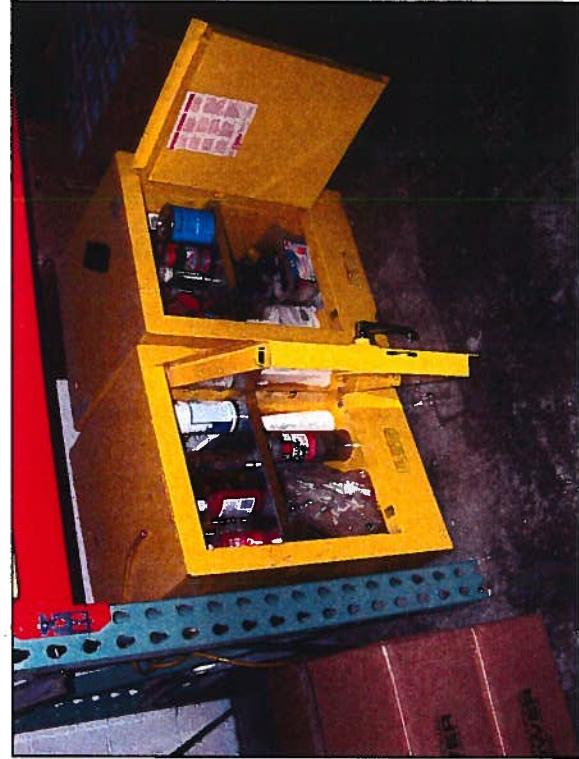
Photograph 5: Paint and chemical storage near slop sink in Polymedco warehouse building.



Photograph 6: Chemical storage shelf in Polymedco warehouse building.



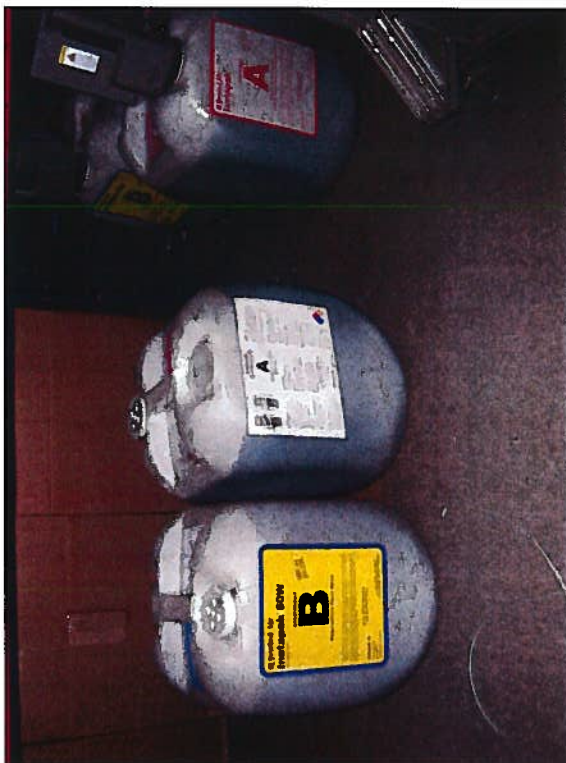
Photograph 7: Naptha container in Motion Labs production area.



Photograph 8: Flammable chemical storage in Motion Labs production area.



Photograph 9: Flammable chemical storage in Motion Labs production area.



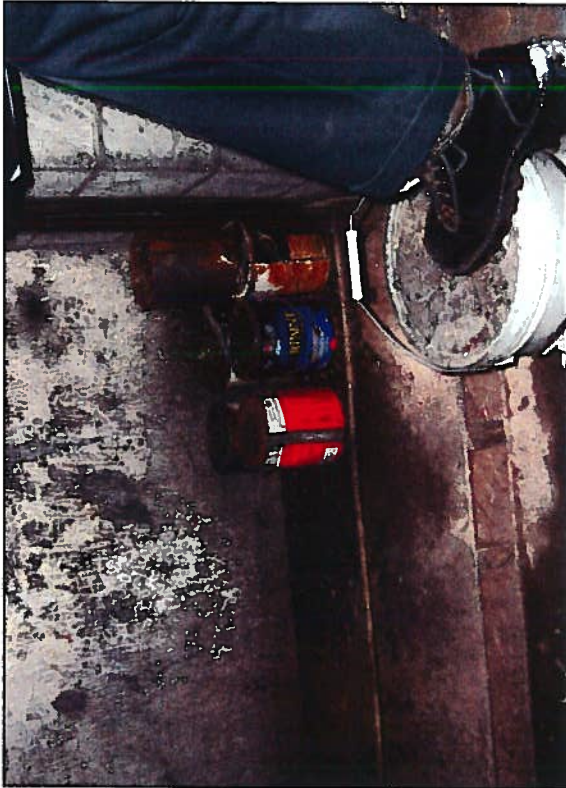
Photograph 10: Chemical storage in Motion Labs production area.



Photograph 11: Chemicals and degreasers in Motion Labs machine shop.



Photograph 12: Kerosene storage in Motion Labs machine shop.



Photograph 13: Paint storage in fuel oil boiler room attached to Motion Labs.



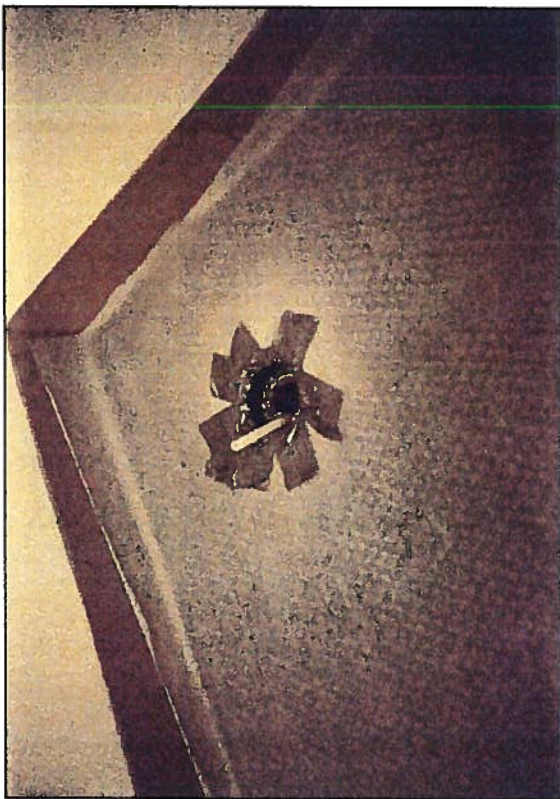
Photograph 14: Janitor closet in International Purchasing Systems warehouse.



Photograph 15: Coring of concrete at sample point SV-15.



Photograph 16: Installation of vapor point.



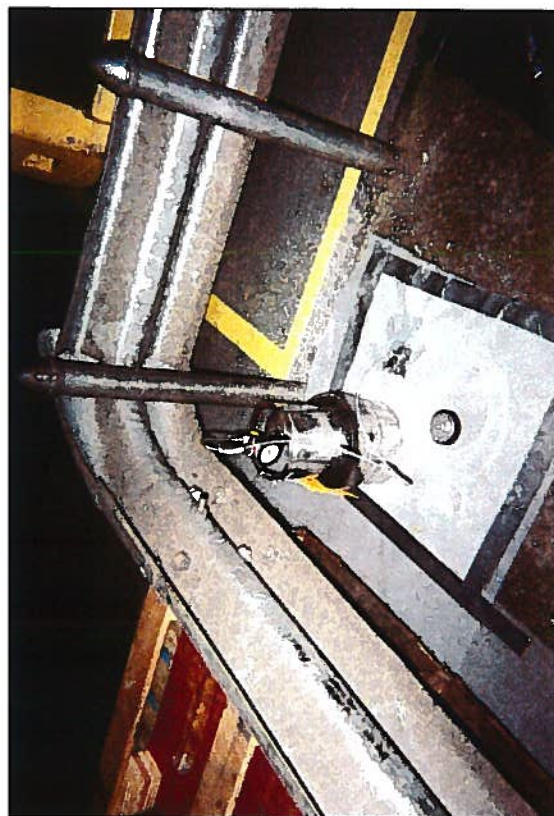
Photograph 17: Preparation of vapor point for purging.



Photograph 18: Final sample set-up with Summa canister.



Photograph 19: Sample point SV-13 with duplicate sample.



Photograph 20: Sample point SV-14 in Polymedco warehouse.

**APPENDIX C**  
**SOIL GAS SAMPLING LOGS**

# Soil Gas Sampling Log

Job No: 40256 Client: ISCP Properties  
Project Location: Magna metals, Cortlandt Sampled By: BT / BZ  
Date: April 5, 2007

Sample ID: SU-11, SS

## Purging

Time Started: 8:15  
Time Stopped: 8:20  
Vol. Purged: 0.4 liters  
Flow Rate: ~ 0.1 L/min

CANISTER N<sup>o</sup>. 2985  
FLOW CONTROLLER:  
K328

## Laboratory Sample (Summa Canister)

Time Started: 8:34 Vacuum: 30 "Hg ~~psi~~  
Time Stopped: 16:34 Vacuum: 3.5 "Hg ~~psi~~

## Field Sample

PID Calibration: \_\_\_\_\_  
Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
PID Reading: \_\_\_\_\_ ppm  
He Reading 0 %

# Soil Gas Sampling Log

Job No: 40256 Client: ISCP Properties  
Project Location: Magna metals, Cortlandt Sampled By: BT/BZ  
Date: April 5, 2007

Sample ID: SV-U, AA

N/A

Purging

Time Started: 08:05  
Time Stopped: 16:07  
Vol. Purged: \_\_\_\_\_ liters  
Flow Rate: \_\_\_\_\_ L/min

CANISTER NO. 6591  
Flow  
Controller: K352

Laboratory Sample (Summa Canister)

Time Started: 08:05 Vacuum: 30 "Hg psi  
Time Stopped: 16:07 Vacuum: 4.5 "Hg ~~psi~~

Field Sample

PID Calibration: \_\_\_\_\_  
Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
PID Reading: \_\_\_\_\_ ppm  
He Reading \_\_\_\_\_ %

N/A

## Soil Gas Sampling Log

Job No: 40256 Client: ISCP Properties  
Project Location: Magna metals, Cortlandt Sampled By: BT/BZ  
Date: April 5, 2007

Sample ID: SV-12, SS

### Purging

Time Started: 8:25  
Time Stopped: 8:30  
Vol. Purged: 0.5 liters  
Flow Rate: 0.1 L/min

CANNISTER NO. 1519  
FLOW CONTROL K119

### Laboratory Sample (Summa Canister)

Time Started: 08:37 Vacuum: 30" Hg  
Time Stopped: 16:38 Vacuum: 35" Hg

### Field Sample

PID Calibration: \_\_\_\_\_  
Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
PID Reading: \_\_\_\_\_ ppm  
He Reading: 0 %

# Soil Gas Sampling Log

Job No: 40256 Client: ISCP Properties  
Project Location: Magna metals, Cortlandt Sampled By: BT / BZ  
Date: April 5, 2007

Sample ID: SV-12, AA

## Purging

Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
Vol. Purged: \_\_\_\_\_ liters  
Flow Rate: \_\_\_\_\_ L/min

CANISTER NO. 60.  
FLOW CONTROL K288

## Laboratory Sample (Summa Canister)

Time Started: 10:15 Vacuum: 30 "Hg  
Time Stopped: 18:15 Vacuum: 5.5 "Hg psi

## Field Sample

PID Calibration: \_\_\_\_\_  
Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
PID Reading: \_\_\_\_\_ ppm  
He Reading \_\_\_\_\_ %

# Soil Gas Sampling Log

Job No: 40256 Client: ISCP Properties  
Project Location: Magna metals, Cortlandt Sampled By: BT / BZ  
Date: April 5, 2007

Sample ID: SV-13 SS

Purging

CANISTER N<sup>o</sup>. 1425  
FLOW CONTROL KUD

Time Started: 8:51  
Time Stopped: 8:56  
Vol. Purged: 0.5 liters  
Flow Rate: 0.1 L/min

Laboratory Sample (Summa Canister)

Time Started: 09:01 Vacuum: 28" Hg  
Time Stopped: 17:06 Vacuum: 3.5" Hg

Field Sample

PID Calibration: \_\_\_\_\_  
Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
PID Reading: \_\_\_\_\_ ppm  
He Reading 0 %

## Soil Gas Sampling Log

Job No: 40256 Client: ISCP Properties  
Project Location: Magna metals, Cortlandt Sampled By: BT / BZ  
Date: April 5, 2007

Sample ID: SU-13, AA

### Purging

Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
Vol. Purged: \_\_\_\_\_ liters  
Flow Rate: \_\_\_\_\_ L/min

CANISTER NO. 1345  
FLOW CONTROL 4519

### Laboratory Sample (Summa Canister)

Time Started: 08:53 Vacuum: 30" Hg ~~1345~~  
Time Stopped: 10:10 Vacuum: 5" Hg ~~1345~~

### Field Sample

PID Calibration: \_\_\_\_\_  
Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
PID Reading: \_\_\_\_\_ ppm  
He Reading \_\_\_\_\_ %

# Soil Gas Sampling Log

Job No: 40256 Client: ISCP Properties  
Project Location: Magna metals, Cortlandt Sampled By: BT / BZ  
Date: April 5, 2007

Sample ID: SV-13 SS (DUP)

## Purging

Time Started: 8:51  
Time Stopped: 8:56  
Vol. Purged: 0.5 liters  
Flow Rate: 0.1 L/min

CANISTER NO. 0080  
FLOW CONTROL K 354

## Laboratory Sample (Summa Canister)

Time Started: 09:01 Vacuum: 30" Hg  
Time Stopped: 17:06 Vacuum: 4.5" Hg

## Field Sample

PID Calibration: \_\_\_\_\_  
Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
PID Reading: \_\_\_\_\_ ppm  
He Reading 0 %

# Soil Gas Sampling Log

Job No: 40256 Client: ISCP Properties  
Project Location: Magna metals, Cortlandt Sampled By: BT / BZ  
Date: April 5, 2007

Sample ID: SV-14, SS

Purging

CANISTER N<sup>o</sup>. 1286  
FLOW CONTROL 1287

Time Started: 9:20  
Time Stopped: 9:25  
Vol. Purged: 0.5 liters  
Flow Rate: 0.1 L/min

Laboratory Sample (Summa Canister)

Time Started: 09:28 Vacuum: 30" Hg  
Time Stopped: 17:28 Vacuum: psi

Field Sample

PID Calibration: \_\_\_\_\_  
Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
PID Reading: \_\_\_\_\_ ppm  
He Reading 0 %

## Soil Gas Sampling Log

Job No: 40256 Client: ISCP Properties  
Project Location: Magna metals, Cortlandt Sampled By: BT / BZ  
Date: April 5, 2007

Sample ID: SV-14, AA

### Purging

Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
Vol. Purged: \_\_\_\_\_ liters  
Flow Rate: \_\_\_\_\_ L/min

CANISTER NO. 1287  
FLOW CONTROL K351

### Laboratory Sample (Summa Canister)

Time Started: 09:13 Vacuum: 30" Hg  
Time Stopped: 17:20 Vacuum: 4.5" Hg

### Field Sample

PID Calibration: \_\_\_\_\_  
Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
PID Reading: \_\_\_\_\_ ppm  
He Reading \_\_\_\_\_ %

## Soil Gas Sampling Log

Job No: 40256 Client: ISCP Properties  
Project Location: Magna metals, Cortlandt Sampled By: BT / BZ  
Date: April 5, 2007

Sample ID: SV-15, SS

### Purging

Time Started: 9:40  
Time Stopped: 9:45  
Vol. Purged: 0.5 liters  
Flow Rate: 0.1 L/min

CANISTER NO. 6574  
FLOW CONTROL 5148

### Laboratory Sample (Summa Canister)

Time Started: 09:50 Vacuum: 30" Hg  
Time Stopped: 16:56 Vacuum: 8" Hg psi

### Field Sample

PID Calibration: \_\_\_\_\_  
Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
PID Reading: \_\_\_\_\_ ppm  
He Reading 0 %

# Soil Gas Sampling Log

Job No: 40256 Client: ISCP Properties  
Project Location: Magna metals, Cortlandt Sampled By: BT / BZ  
Date: April 5, 2007

Sample ID: SV-15 AA

## Purging

Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
Vol. Purged: \_\_\_\_\_ liters  
Flow Rate: \_\_\_\_\_ L/min

CANISTER N° 1407  
FLOW  
CONTROL K356

## Laboratory Sample (Summa Canister)

Time Started: 09:28 Vacuum: 30" Hg ~~psi~~  
Time Stopped: 16:55 Vacuum: 6" Hg psi

## Field Sample

PID Calibration: \_\_\_\_\_  
Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
PID Reading: \_\_\_\_\_ ppm  
He Reading \_\_\_\_\_ %

# Soil Gas Sampling Log

Job No: 40256 Client: ISCP Properties  
Project Location: Magna metals, Cortlandt Sampled By: BT / BZ  
Date: April 5, 2007

Sample ID: OUTDOOR 1

## Purging

Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
Vol. Purged: \_\_\_\_\_ liters  
Flow Rate: \_\_\_\_\_ L/min

CANISTER NO. 0433  
FLOW CONTROL K223

## Laboratory Sample (Summa Canister)

Time Started: 09:40 Vacuum: -30" Hg  
Time Stopped: 17:50 Vacuum: 10.5" Hg

## Field Sample

PID Calibration: \_\_\_\_\_  
Time Started: \_\_\_\_\_  
Time Stopped: \_\_\_\_\_  
PID Reading: \_\_\_\_\_ ppm  
He Reading \_\_\_\_\_ %

**APPENDIX D**  
**ANALYTICAL DATA REPORT**